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ON
GONORRHEA.

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A

NEW WAY OF TREATING

GONORRHŒA.

ON

A NEW WAY OF TREATING

GONORRHOEA.

BY

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TO

JOHN GAY, ESQ.,

FELLOW OF THE ROYAL COLLEGE OF SURGEONS, &c.

MY DEAR MR. GAY,

IN dedicating this work to you, I feel I am only fulfilling a common act of gratitude, as, but for your disinterested kindness, it could never have been brought before the world. I cannot forget that at a time when policy might have taught you to imitate the example of others, and stand coldly aloof, you generously lent me that aid which enabled me to rise to practice and gain most useful experience. Such friendship as this both smoothen and shortens the struggles every man has to encounter.

Believe me,

My dear Mr. Gay,

Your sincere and obliged friend,

THE AUTHOR.

ADVERTISEMENT.

I HAVE, in the following pages, endeavoured to the utmost of my power to describe faithfully my reasons for deviating from the ordinary way of treating gonorrhœa, and for substituting a new plan.

I aim at *a radical cure*, at a system which enables the surgeon to unwind link by link the chain of disease. To remove appearances without checking the actions which produce them, is a deception alike calamitous to the surgeon and his patient.

A radical cure can alone be safe and speedy at the same time. But then by cure I understand *a complete and lasting return of the mucous membrane of the urethra to a healthy state.*

April 26, 1852.

40, Jewin Street, City.

Treatment of Gonorrhœa.

“Nissuna infermita fra le molte, che alla misera humanità rendono molesta la vita, esercito mai tanto la mente dei professori dell’ arte di medicare quanto quella che dal fonte dei venerei dilette trasse l’origine ed il nome.”—*Perenotti di Cigliano*.

“Die Gicht und die Lustseuche vielleicht ausgenommen, wird es keine Krankheit mehr geben, gegen welche eine solche Menge von Arzneimitteln empfohlen und angewendet wurde, als beim tripper.”—*Eisenmann*.

1. Introductory remarks. 2. Division of remedies now in use into (a) internal remedies; (b) external applications; (c) direct applications. 3. Proposed plan of treatment. Cases.

1. *Introductory Remarks*.—I shall not touch upon the history of gonorrhœa, having nothing to add to what has already been written. No one has yet come forward with such a mass of evidence as to settle the question, at least satisfactorily to the bulk of readers, of the antiquity or newness of the disease; and to offer anything additional, except with a view of ending for ever the difference of opinion now prevalent, could only tend to render the confusion and doubt more thoroughly irremediable.

In a spirit of genuine hostility to the prevailing fashion, I have not said one word respecting the symptoms, as they have already been amply treated of, even before the present generation of surgeons appeared on the stage; and, were all other works to perish by one of those accidents which from time to time convulse society, Hunter’s unequalled monograph would always supply a chapter of symptoms, on which it would be impossible to improve. In that magnificent work, a want of finish may sometimes offend the eye, but the outline is sketched with a master hand, and the colouring is ever vigorous and full of harmony. Yet how often, good God! are we still to be told, that “by gonorrhœa is understood an inflammatory affection of the urethra,” and that “the first symptoms of the disease consist in itching, redness, and swelling of the orifice of the urethra?”

The pathology, our knowledge of the causes and nature of this disease, may wait centuries for the advent of another Ricord. The discovery of truth will hardly be promoted by interesting anecdotes often related by the patient for the sole purpose of deceiving the surgeon; or to gratify that taste for the marvellous and delusive which is innate in the minds of most men, and irresistibly impels some to sacrifice sober truths to display.

Treatment, then, (which appears to me the great object after which we ought to seek,) is the main subject of consideration in this paper, given out now as a body, to which may be attached the scattered members published at intervals in the *Medical Times*,—each possessed, it may be, of independent vitality, but wanting the completeness which springs from the presence of the parent trunk.

This great want has been but slowly met, notwithstanding the publication of so many hundred works on the venereal disease.* Among the “authorities,” scarcely two are to be found who treat the disease alike; and this disunion has naturally extended itself to those who look to the heads of the profession, as oracular sources whence they may imbibe true inspiration.

Of the vast variety of injections, how many have held their ground? How many plans of treatment have arisen, and flourished only to decay?† Patients have been half scalded or macerated, we are told, in hot baths; the penis has been almost frozen with cold lotions; nay, the patient has been enjoined not to make water in the streets, lest the penis might take cold, and yet told in the same breath to keep himself cool! Purgatives and diuretics, astringents and laxatives, stimulants and sedatives, expectorants, demulcents, and alexipharmics have all been tried in turn—all, at times, only to yield disappointment. Iodine and mercury have of course not been forgotten, and not only have different actions been excited with a view of curing the disease, but different means of exciting the same action have been resorted to, even by those who saw the action, when it was induced, fail in effecting a cure. Medicines have been vaunted as specifics,

* At the close of the seventeenth century, 400 works had appeared. The classed catalogue in the College of Surgeons mentions nearly a quarter of a thousand, some of which have gone through three or four editions.

† Questo immense serie di medicamenti dimostra che ancora non sie trovato quello, che in preferenza di tutti gli altri, possa estinguere senza conseguenza lo scolo gonoroico. Dom. Cirillo. P. 185.

though no specific exists for any disease of the mucous membranes. Injections have been used, now homœopathically dilute, and, again, of a strength only calculated to produce the most deleterious effects.*

A history of the *treatment* of gonorrhœa would not only be amusing but instructive; I know not if such a work exists. It would show us what means of cure have been tried, what overlooked and ignored; thus preserving us from the errors into which the old surgeons fell, chiefly from the want of those beacons which guide our path. Perhaps, too, it might in some measure tend to check that tendency to regard ourselves as superior to our forefathers, — one of those flattering delusions into which our insatiable and restless vanity is so prone to lead us; as if man ever progressed! As an individual he may, as the type of the race never,—no, not one step further than those inferior animals he so cruelly abuses; his great efforts scarcely preserve him from falling back.

A hundred and fifty years ago, when a Mohock had, to use the elegant language of that day, conversed with a Slut, and caught a pocky Running with a stupidity of the Yard, he adjourned to some coffee-house, and sent secretly for his surgeon, who came staff in hand, and after roundly abusing the “scoundrel over the way, at the sign of the Hand and Urinal or the Blue Ball,” undertook to cure him for some good round sum. And he kept his word; by rough means, it is true, as “bleeding and purging,” with the use of some messes which cast our most complicated medicines into the shade.† But he cured the patient, often with a rapidity we should have some difficulty in surpassing, and the grateful patient celebrated the doctor’s skill in couplets worthy of the age.

Three-fourths of a century after, we find the first surgeon in the world‡ questioning the fact that medicine has any power over this disease in perhaps more than one case in ten. Had treatment really retrograded in his day?

* Such as those of chloroform given by Venot; ether injections; the strong injections pushed to the prostatic part of the urethra, by Debeney and Gueterbock, which caused fainting and two or three hours’ agony!

† e. g. R. Nucis Avellan. excort. ℥iv., magister perlar., laudan. Lond., aa ʒj., ferræ sigill, bal veri, sang. dracon., aa ʒij., sem. plant., rasuræ Ebor, aa ʒijj., nucis mosch., No. iii. vel iv., cinnam. ℥i., sacch. ℥ijj., syr. Cydon. q. s. s. Martin—A Treatise on the Venereal Disease, p. 407.

‡ John Hunter on the Venereal Disease, 1788.

I deal not with the past but with the present. The time for the rude treatment which suggested such doubts to the mind of Hunter has passed away; the advances made in medicine, and some fields of investigation necessary but subordinate to it, have made us acquainted with the properties of many substances unknown to the surgeons of a past age. Besides, it is a positive wrong to seek to dim the glory of illustrious men, and open their works merely to cavil at what would now appear gross ignorance and prejudice,—defects for which they cannot in justice be blamed, even as the absence of them cannot be looked on as a merit of modern writers, man being in such things the creature and child of the age he lives in. There are laurels enough to win in untrodden fields without our seeking to wrest them from those to whom we owe so much.

2. *Division of the means of treatment now in use.*—At one time I purposed examining the various plans of treatment adopted in gonorrhœa, but I found it impossible to carry out this idea; for, as many of these plans are exactly alike in great part of their details, and only distinguishable by the use or rejection of some particular remedy, the same arguments would require to be urged again every time the separate divisions of treatment came to be canvassed, thus leading to excessive confusion and repetition. I shall therefore confine myself to an examination of each separate remedy, except in respect to two symptoms, each of which appears unique and complete of itself.

The first of these is the expectant plan, which consists in doing nothing for the disease. A few years of observation would, one might think, suffice to convince any one of the inutility of this system, which, I was astonished to learn, is still pursued; for certainly the ordinary treatment, powerless as it is in many instances, will cure the disease in a fraction of the time it would require to wear itself out.* But there is this consolation for the lovers of orthodox surgery, that those who adopt such a method are not likely to find many converts among their private patients. There are men, it is true, who systematically condemn all treat-

* The *Edinburgh Medical and Surgical Journal*, for April, 1818, gives a table of 55 cases treated in different ways:—15 by fasting and quiet, cured in 2 to 23 days; 8 by cubebs, in 4 to 6 days; 4 by camphor, in 5 to 14 days; 8 by capsicum, in 8 to 24 days; 20 by injections of lapis. infern. ℞i., ad. ℥i., cured in 3 to 42 days. But, with the exception of cubebs, this is only a comparison between bad and expectant treatment.

ment, but they seldom go to the surgeon, and are, indeed, better away.

I have only been able to collect about a dozen cases in which this system was tried, at least where the exact date of the first appearance and final disappearance of the disease could be accurately ascertained. Here the length of time the gonorrhœa had lasted was from six weeks to as many years, whereas a dozen cases taken at random, treated by any of the ordinary formulæ, gave a period ranging from one week to two or three months, though in certain cases enduring much longer. But, in respect to the first class, it should be remarked, on the one hand, that the patients were mostly dissipated or refractory persons, ill calculated for giving fair play to any line of treatment; and, on the other, that in some of the long cases the run of the disease was finally cut short by having recourse to a surgeon, otherwise it might have endured for life. The cure of a disease which had lasted such a length of time is in itself one of the strongest proofs that could be adduced against the expectant treatment.

Again; leaving the disease to wear itself out is not unfrequently followed by stricture, and other organic changes in the urethra. Nay, there is reason to believe that a tendency to this takes place so soon as the phenomena of the disease develop themselves. As Jesse Foot says, "that a gonorrhœa may cease to be a gonorrhœa if left alone to its own action, may be true; but it may also be as true that it might not cease to be a gonorrhœa till it had reduced the organism within the urethra to a condition that could not afterwards be restored to a sound state." There are certainly grave doubts as to gonorrhœa being the cause of stricture; thus Hunter considered the idea founded on prejudice, and other surgeons have held nearly similar opinions; but cases are constantly met with in which we are compelled to admit that it at least appears to hasten its development. It is the frequent appearance of a stricture during or after a neglected gonorrhœa that is so ominous.

My own attempts to arrive at anything like a satisfactory conclusion on this point have utterly failed. After examining a great number of cases, and learning the minutest details, I came to the conviction, that the mere history of the origin of the stricture, as given by the patient, can only go a short way towards determining the question. To solve this we want a series of examinations of

the urethra after death, not only in persons who have suffered under stricture and gonorrhœa, but also in those who have never had either. For this reason I shall withhold the details on which the following conclusions (which seemed all that the mere history of the cases could warrant) were founded.

1. That strictures arise in persons who have never had a gonorrhœa, and in some at such an early age as to preclude all probability of gonorrhœal infection.

2. That occlusions of a similar character occur in other mucous passages without being preceded by any inflammatory and purulent discharge.

3. That discharges of a nature and appearance very similar to clap will come on in those suffering from stricture, even after intercourse with a chaste female; thus rendering it difficult to say, on mere examination, whether the discharge be really gonorrhœa or not. In fact, I suppose most surgeons must have seen cases reported as severe clap and swollen testis which proved, on examination, to be strictures.

4. That the progress of the stricture seems to bear no sort of proportion to the duration or severity of the gonorrhœa; or, if it do, that the proportion is not yet ascertained.

5. That the proportion of patients suffering under stricture to those suffering under gonorrhœa is extremely small. And, moreover, that as the one is an enduring, and the other a fleeting malady, the proportion which stricture cases bear to those of gonorrhœa becomes much further diminished.

6. That it is probable that strictures spring up spontaneously, but may be greatly aggravated or developed by prolonged clap.

The second of these plans is the homœopathic; one of those miserable exhibitions of buffoonery by which men attempt to gain a position they could never honestly attain to; a wretched cheat and delusion fitted only for the brains of a Bedlamite or a knave. Need I say, that as a remedy, it is as worthless as its projectors and patrons? I hasten to pass from the contemplation of such humiliating folly to examine what means true surgery offers for the cure of gonorrhœa.

For this purpose the simplest and most comprehensive division appears to be that into internal remedies, external applications, and direct applications.

(a) *Internal Remedies.*—Perhaps, without exception, the most

potent and universally used of these is *copaiba*, as nauseous and disgusting a drug as ever was administered. No effectual method of disguising its taste has as yet been discovered; and this, with some patients, forms an insuperable obstacle to its use. Besides, it gives rise with some to nausea, or even retching and vomiting, almost every time it is taken; others suffer under griping and purging; and in a third class it produces dyspepsia, and the most distressing irritability of the stomach. The disgust produced by its prolonged use often so exasperates the patient as to make him neglect all treatment, or even to aggravate the disorder by some sudden act of imprudence; to have recourse to dangerous remedies—as excessively strong injections—to overwhelm the disease, as it were, in a debauch, or to plunge into the yawning jaws of some advertising shark.

Many patients also complain of its imparting its odour to the breath, thus becoming at one and the same time a source of annoyance and the means of revealing what they are most anxious to keep secret—for its smell and properties are widely known. When to this we add, that it is by no means infallible, even when used to the extent of \mathfrak{z} ss per dose,* or when its action is promoted by using it in the form of injections, enemata,† suppositories,‡ &c., we may, I think, conclude that, (to use a mild phrase,) its employment is not free from objection. I am at the same time far from denying its efficacy in many cases; but how are we able to say what these cases are—what symptoms they present? When we can answer these questions, the use of *copaiba* will become much more limited; but it will, perhaps, always effect a cure.

As far as I can, I shall adduce cases in support of what I advance, premising that my limits compel me to restrict the number.

Cases treated with Copaiba.

Case 1.—J. D., mild gonorrhœa of three months' standing. Treated with *copaiba* and injections of sulphate of zinc and nitrate

* Cadet's astringent emulsion consisted of balsam *copaiba*, syr. *tolut.*, aa \mathfrak{z} j., aq. ros. rub. \mathfrak{z} vj., gummi *mimosæ*, spir. ether. nit., aa. \mathfrak{z} j. M., one half at night, and the other half next morning.

† Velpeau.

‡ Ricord.

of silver. Afterwards bitters and salines. At the end of seventy-seven days not quite cured.

Case 2.—W. J., gonorrhœa of three or four days' standing. Ant. pot.-tart., eopaiba, turpentine, and steel. At the end of eighty-six days left off attending, not eured.

Case 3.—Of three days' standing. Pulv. salin. At the end of fourteen days, eopaiba and turpentine, followed by colchicum. On the fifty-ninth day, there was still some purulent running. Six days later he was eured.

Case 4.—J. S. had been treated seven months with copaiba, sulphate of magnesia, &c. There was still gleet, cloudy urine, and pain over the region of the bladder.

Case 5.—L. H., gonorrhœa of a month's standing, for fourteen days of which he had used injections and purgatives. Treated for seven days with saline powder and injections of sulphate of zinc; then with eopaiba and turpentine; the injection being continued, as also the pulv. salin. to open the bowels. Cure in fifty-two days.

Case 6.—Mr. W., gonorrhœa of a week's standing, his first infection. Treated with magnes. sulph., and afterwards copaiba and nitrate of potass., followed up by injections of sulphate of zinc. Being rather timid, he followed up his treatment perseveringly for three months, when, getting tired of the expense and irksomeness of the task, he gave it up, and allowed the disease to run its course. It gradually died away, so that he had some difficulty in fixing the date of its last appearance.

Case 7.—Mr. W., had gonorrhœa for some days before he began to treat it. It was the first attack. Treated with aperients and copaiba. In a short time it was nearly well, when he imprudently bathed, which was followed by a relapse. At the end of seven months' persevering use of copaiba he was scarcely well.

Case 8.—Mr. N., gonorrhœa; second attack, very severe; more pain and discharge than in the previous attack. Treated with eopaiba, liq. potassæ, and compound calomel pill at night, till his breath was affected. The cure was twice protracted by his giving up medicine at the end of three or four weeks, just as he was on the point of being eured. By the ninetieth day it had disappeared. I saw him repeatedly after, and he had had no return.

Case 9.—Mr. R., gonorrhœa of four days' standing; first case, complicated with a sore on the penis. Copaiba and liq. potassæ, with five grains of blue pill every night. Swelled testicle and bubo came on, and the patient was nearly five months under treatment, the discharge ceasing under the use of injections in about three months.

Case 10.—Mr. W., gonorrhœa of a fortnight's standing; first case. Treated most perseveringly with copaiba, cubebs, zinc injections, and aperients. The patient was most sedulous in his attendance, and remained almost constantly at home in order to get well sooner. At the end of twelve weeks there was but little improvement.

Case 11.—Mr. E., gonorrhœa of four days' standing; second attack. Treated with a brisk purgative, and then with copaiba, liquor potassæ, and compound calomel pill, aided by zinc injection, and the occasional injection of a strong solution of nitrate of silver. Cured in about seven weeks.

Case 12.—Mr. B., gonorrhœa of some weeks' standing. Treated with copaiba, liquor potassæ, and compound calomel pill, occasional injections of nitrate of silver, and the regular use of sulphate of zinc injections. At the end of two months attendance he left, having still a gleet, which he flattered himself would die away.

I have seen so many instances in which copaiba was used for very long periods, as six or nine months, aided by aperients, injections, abstinence, &c., and yet not effecting a cure, that it was impossible to shut out the conviction of its possessing no power over those cases which were nothing more than simple clap. For the sake of brevity, I will only allude to one. The patient took ℥jss. of copaiba and sweet spirits of nitre regularly every week, for the space of a year, and was ultimately cured by a few injections properly given. It will, perhaps, be said, that it was here given injudiciously, having been begun with at the commencement; but these cases embraced every variety; and if I am to believe what some surgeons have advanced respecting it, (which my own observation entirely confirms,) there is no stage in which it cannot be safely administered.* It is very doubtful if it is more usefully given when the phenomena of inflammation

* Ansiaux, p. 9.

have gone. Remedies seem to act most vigorously in the early stages; that which will often cure a gonorrhœa before the end of the first week, may be inert at the end of the first month.

Here the reader may object that I am making out a case against copaiba, that I am looking only at the dark side of the question. So far from it, I am quite willing to admit that it cures, and very speedily and safely cures, a great number of cases; but then I think no one will deny that it leaves a great many cases uncured, and I am only doing what every man may do, appealing to the results of my own experience. Any one who finds so many cases uncured, after a long and fair trial, is plainly justified in seeking for a more generally useful remedy.

Turpentine is closely allied to copaiba, but less powerful. Like the other, it sometimes gives rise to sickness and nausea; but in ordinary doses, such as are given for gonorrhœa, these symptoms seldom rise to any great height. It is not improbable that, if used in large quantities, such as are prescribed for worms, it might, in certain instances, at once arrest the discharge; and some authors cite cases in which it has done so.* After using it for several months, sometimes along with copaiba and injections, sometimes alone, I was unable to observe any superiority over milder and more agreeable remedies. In a few cases, especially when aided by injections or copaiba, it appeared to assist somewhat in checking gleet discharges. Over others, particularly when used alone, it did not seem to exert the slightest influence. Moreover, to have any great effect, it must be given either to the extent of eight to twelve pills for a dose, or in a fluid form, as emulsion, when it is almost as repulsive as copaiba—a strong objection to its use.

Cubebs I can say but little of, having never given it to any great extent; the results I have seen of its administration by others, have not encouraged me to do it. It incontestably fails in many,† according to some authors in most, cases,‡ and produces no very marked effects, or even exasperates the symptoms in others. It may add to our estimate of the merits of both,

* Martin, p. 405, gives from another author the following prescription. R. Tereb. Venet. ʒij. pulv. rhei ʒj. M. ft. bolus. Sir T. Mayerne gave ʒj. doses with success.

† Crawford *Edinburgh Med. and Surg. Journal*, 53, p. 32. Broughton Transactions of the *Med. Chirurg. Society*, XII. part 1.

‡ Pereira.

when we are told on high authority,* that we frequently only obtain its good effects by alternating it with copaiba; but the announcement increases the difficulty of treatment, and shows how much this subject still requires practical investigation. In some persons cubebs undoubtedly checks gonorrhœa with marvellous celerity, but then it is to be borne in mind, that we frequently meet with individuals so happily constituted as to be cured of a very severe clap by very simple remedies.

Antiphlogistic measures have been employed, both to cure the disease, and to pave the way with use of injections and copaiba, which they do, it is said, in the course of six or seven days; a period, be it observed, sufficient to cure or bring down to a state of gleet, the bulk of cases treated simply with a few injections and rest.

If I understand the term aright, antiphlogistic treatment, means the indiscriminate application of a certain series of measures, such as the use of mercury, tartar emetic, digitalis, of blood-letting, leeches, and cupping, continued with low diet, with a view of combating inflammation, totally irrespective of the structure, primarily or chiefly invaded. This practice appears to me founded on entirely false principles, even if it do not manifest a total disregard of any principle at all; for as every structure, every secreting organ, has from the moment life begins, an unalterable tendency to take on certain forms of action and development, whereby its anatomy and normal functions differ from those of any other structure and organ, so will its diseases be peculiar to itself. The unity of the primary elements, from which the various structures take their source, offers no support for the idea of unity of treatment, any more than it would warrant us in expecting the same virtues from every part of the plant we may prescribe, because every part springs from simple primary forms.

The application of such measures to gonorrhœa, is an instance in point. Remedies which hardly ever fail to control inflammations of the cellular tissue, exert only the most insignificant power here, even when used most heroically. Bleeding from the arm, forty leeches to the perinæum, calomel, and tartar emetic, perhaps never effect that complete change in the disease, which often follows the use of one strong injection. They lower the patient, it is true, make him weak and ill, and perhaps sometimes render the disease,

* Ricord, also Eisenmann, B. i. s. 257.

as well as the patient, more tractable ; but it is impossible to avoid observing, that the rest in bed, and abstinence enforced at the same time, would of themselves produce the same effect.

That the abstraction of blood, which figures so prominently in antiphlogistic treatment, should ever have been ineuleated in gonorrhœa is astounding, and like the necessity of restricting the patient's diet, shows the inefficiency of medicines alone. It proves also, that the surgeon's faith in the efficacy of the medicines he employs is slight and wavering ; that he considers that unless the material on which these medicines are to act, be thinned down or lessened in quantity, the medicine is incapable of producing its effects ; that it is not adequate to surmount the resistance offered by a normal state of the fluids to its action on the disease. Blood-letting would appear to be only efficacious by the shock it gives to the system, or by diminishing the quantity of fluids on which a given quantity of medicine has to act ; so that were it not that blood is so much more easily reproduced, I would hold the abstraction of such a vital fluid in a disease like gonorrhœa, as unjustifiable as the abstraction of the same quantity of vital solids.

But we are told that when the inflammation runs high, or extends backwards to the bladder, this class of remedies and bleeding, in especial, are indispensably called for ; and their exhibition has actually been recommended by those who confess that they never saw a case of such severity as really to demand their employment. It is difficult to set limits to the spread of inflammatory actions in mucous membranes, and therefore I will not deny the possibility of such a grade of inflammation accompanying the disease as to justify resorting to them. But in several thousand cases, I never saw anything of the kind, and till I do, I must either renounce the evidence of experience, or condemn antiphlogistic treatment.

In deciding upon the value of *purgatives*, it is necessary to separate severe from mild purging, or the ordinary action of aperients. In many instances, the effect of a powerful purgative is undoubted, as at the commencement of the disease, or in mild cases, when it frequently aids most materially in cutting it short. But the frequent use of this class of remedies is fraught with harm, often engendering such a costive state of the bowels, that these refuse to act unless stimulated by stronger doses. More-

over, their influence over the disease seems very limited if it be of an obstinate kind. For centuries men have been attempting to cure gonorrhœa by strong purgatives; the older authors teem with cases, and yet the goal is no nearer.

That the milder cases are soon cured by the use of *aperients* and injections, is a fact known to every practitioner; and it is generally maintained that a constipated state of the bowels is most injurious.

Could we but discriminate the cases at the outset, and were the duration of the treatment an object of no importance, perhaps eight out of ten would never require more than mild aperients, aided by an occasional injection. Some surgeons never prescribe anything further; but this plan has the two great disadvantages of being both slow and uncertain, as the following table will go to prove.

CASES TREATED WITH APERIENTS.

	Name.	Days previously ill.	Character of the disease, and previous treatment when ascertained.	Treatment. Medicines.	Injections.	Date of final disappearance of discharge.
1	R. M. K.			Salines, carb. of soda and pulv. jalap.	None.	Left at the expiration of 13 days, in no way improved.
2	A. R.	10		Saline powder, consisting of pulv. rhei., pot. nit., and sulph. magnes.	Sulph of zinc ʒi. to Oj.	At the end of 35 days the discharge disappeared, but returned immediately on leaving off treatment.
3	J. S.	30	Complicated with rheumatism.	Do.	Do.	Cure complete in 19 days.
4	J. B.	21		Pulv. soda c. jalap.	None.	On the 25th day only a slight gleet remaining.
5	H. B.	Not ascertained.		Pulv. salin. pot. nit. c. pulv. antim.	None.	On the 35th day the discharge was still bad.
6	J. R.	Do.		Pulv. sod. c. jal. pulv. salin., mist. salin., followed by tincture of steel.	None.	On the 34th day there was still some scalding, accompanied by purulent discharge.
7	J. C.	Do.		Pulv. salin.	Sulph. zinc.	At the end of 75 days there was some improvement. He now took no medicine for 35 days, during which time there was no further alteration in the disease.

	Names.	Days previously ill.	Character of the disease, and previous treatment when ascertained.	Treatment. Medicine.	Injections.	Date of final disappearance of discharge.
8	W. B.		Apparently from over walking.	Dilute sulph. acid and aperients.	None.	The discharge ceased on the 3rd day.
9		30	He had drunk beer, and tried to cure himself with salts.	Pulv. salin. Restricted diet.	Sulph. of zinc.	Cure by the 35th day; the scalding ceased on the 6th day.
10	A. D.	30	He complained of the scalding being very severe.	Pulv. salin.	Do.	By the 21st day the scalding had nearly ceased, and by the 25th the discharge was gone.
11		3	Not very severe.	Pulv. sod. c. jal. No restriction in food or drink.	Lotio saturn. to the penis.	On the 30th day there was still some purulent discharge.
12	A. S.	Not ascertained.		Pulv. sod. c. jal. mist. salin.	Do., followed by injec. of sulph. of zinc.	On the 39th day there was still some purulent discharge.
13	W. S.			Pulv. sod. c. jal. pulv. salin.	Lotio saturn.	On the 61st day there was still some purulent discharge.
14	A. S.	4		Pulv. sod. c. jal. No restriction in diet.	Do.	On the 16th day almost well.
15	A. H.	4		Do. do.	Do	No improvement at the end of 33 days.
16	D. F.	6		Do. do.	Do.	At the end of 14 days there was but little improvement.
17	R. K.	90	He had taken copaiba and catechu, and used injections.	Pulv. salin.	Lotio saturn. and after 24 days sulph. zinc.	Cure in 78 days.
18	S. C.	7		Pulv. sod. c. jal. salines.	Lotio saturn.	On the 30th day the chordee had ceased, but scalding and discharge were present.
19	E. S.	90	Very mild.	Pulv. salin.	Sulph. zinc.	Cure in 4 days.
20	M. J.	42		Ant. and salines.	Do.	Cure in 30 days.
21	B. B.	42	Cubebs in mixture.	Pulv. salin. Not restricted in diet, drank beer.	Do.	On the 40th day there had been no discharge for a week; there was still some smarting on making water.
22	J. P.	270	Thick white discharge, no chordee: lived regularly, took medicine, and no malt liquor.	Pulv. salin., tinct. of steel.	Lotio saturn.	On the 49th day there was still some discharge.
23	W. C.	3		Pulv. salin. Drank beer.	None.	No improvement at the end of 33 days.
24	A. S. K.	6		Pulv. salin.	Sulph. of zinc.	In 12 days had diminished to a gleet, and a few injections completed the cure.
25	H. C.	3		Pulv. salin.	Do.	Cure in 43 days.

	Names.	Days previously ill.	Character of the disease, and previous treatment when ascertained.	Treatment. Medicino.	Injections.	Date of final disappearance of discharge.
26	G. W.	24		Pulv. salin., followed by copaiba and turpentine.	None.	Cure in 16 days.
27	H. H.	Not ascertained.	Said to be non-venereal.	Pulv. salin.	Sulph. of zinc.	Cure in 12 days.
28	J. S.	60	Copaiba and injections.	Pulv. sod. c. jal.	Do.	Cure in 12 days.
29	S. W.	Not ascertained.	Said to be from a strain.	Do., and tinct. ferri. m. xx. ter die.	None.	On the 37th day there was still a slight gleet, when the tincture was commenced. Cure in eight days more.

CASES TREATED WITH PURGATIVES.

	Name.	Days previously ill.	Character of the Disease, and previous treatment when ascertained.	Treatment. Medicine.	Injections.	Date of final disappearance of the discharge.
1	W. D.	10	First clap.	Strong purgatives. Pot. sod. c. rhei. gr. reae. c. pot. nit.	Sulph. zinc. arg. nit.	On the 35th day a stricture was detected. Cure in 2 months by bougies.
2	J. B.	3		Strong purgatives.	Nit. of silver.	Cure in 16 days.
3	W. H.	Not ascertained.		Do.	Sulph. of zinc, and occasionally nit. of silver.	Cure in 28 days.
4	J. S.	60		Pulv. salin. Steel and purgatives.	For one month none, then a strong injection once a week, and used one himself occasionally.	Cure in 47 days.
5	S. C.	Not ascertained.		Hyd. chlor. and haust. cath.	None.	At the end of 15 days no improvement.
6	H. H.	Not ascertained.		Do., followed by pot. sod. c. infus. rhei.	Injection only in the latter part of the treatment.	At the end of 35 days still some running.
7	G.	Not ascertained.		Purgatives.	Do.	At the end of 13 days still some discharge.

When a case once proves refractory, no further benefit seems to arise either from increasing the dose, or persevering in the use of purgatives. Of this, practice affords us every day the most convincing proofs, as there is perhaps no surgeon, however limited his sphere of observation, who has not seen cases in which patients attempting to cure themselves had persevered in their use for months without materially relieving the disease.

The principal *diuretics* used in gonorrhœa are the spir. ether., nit. potass., nit. pot. aet., and pot. liquor.; though perhaps the latter ought only to be classed exceptionally under this head, being an antacid.

Unless we pre-suppose that in curing one action it is necessary to substitute another, or that when we use balsams or similar remedies, it is necessary to direct them in their exit from the body, as much as possible over the surface generating pus, we seem to have no very satisfactory reasons for using diuretics at all, and yet their employment is often advantageous. Increased action of the kidneys and bowels, to an extent, short of exciting constitutional irritation, so constantly tends to alleviate the disease, that diuretics have been admitted into almost every useful plan of treatment. The spirit of nitre is, perhaps, the most unexceptionable and pleasant to take. It rarely offends either the taste or the stomach, and even where not beneficial, never acts injuriously. The nitrate of potass was, as I have stated in my paper on scalding, given to the extent of ʒvi. a day, without producing the least effect either on the disease or the scalding.

The *salts of potass* seem to offer us an asylum from these discouraging obstacles. The liquor potassæ above, is capable of curing gonorrhœa, and in conjunction with other remedies, often renders us the best assistance. Its powerful chemical action on the organized tissues, on fibrine, gelatine, mucous membrane, and blood; its powers of producing diuresis, and the absorption of either solid or fluid products,* the great changes it sometimes works in croup and bronchitis, would tend to show that could it be used in sufficiently large doses, we might find in it the key to some safer and more rapid cure for gonorrhœa than we now possess.

As a remedy in gonorrhœa, acetate of potass was, I believe, first introduced by Mr. Hilton, to the notice of the profession.* Long

* Brodie's Lectures illustrative of various subjects in Pathology and Surgery.

† *Lancet*, 1850, vol. ii., p. 507.

previously I had used it extensively, but invariably found it alone almost valueless, and far inferior to liq. potassæ or even simple aperients. At the very time the report was published in the *Lancet*, I was engaged in ascertaining its effects, when used in combination with other salts of potass, and the results of these observations form the conclusion of this paper.

A close scrutiny of Mr. Hilton's cases is in no way calculated to inspire us with a high opinion of its efficacy, as mere rest and abstinence would have effected the same improvement in the same time. In the first case the discharge ceased within 16 days; in the second, on the 8th day; and in the third, "no very material improvement took place for the first 15 days," and at the end of 39 days "the discharge and scalding were entirely subdued."

Alteratives.—Although the reign of mercury did not quite cease with the establishment of the dogma, that gonorrhœa and syphilis are different in their progress and effects, if not in their cause, yet the salivation of gonorrhœa patients, and a belief that mercury used as an antiphlogistic, can in any way be beneficial in this disease, have nearly disappeared. The use then here of mercury and iodine, is perhaps based on their undoubted value in local congestions and purulent accumulations in the cellular tissue, as well as their less certain influence over purulent discharges from the mucous membranes. In scarcely a single instance have I seen benefit from their employment in gonorrhœa, even when carried to the extent of inducing salivation, and even in those obstinate cases where there is a fixed pain in the under part of the urethra, and where I was led to expect the best effects from the alterative powers of mercury, complete failure was always the result. Where the bowels or liver are sluggish, calomel and blue pill, in such doses as to procure a free action of these organs, will aid our treatment, but there I am disposed to say their value stops.

As to the *diet*, during the acute stage, there is, I believe, now but one opinion, namely, that it should be as light as possible, and that beer, wine, and ardent spirits, should be entirely prohibited. But there are two things fully as deserving of being banished from the bill of fare, to wit, cheese and salt meats. The former, a powerful astringent, is not only calculated to do, but often does considerable mischief, by producing constipation of the bowels, and disordering the stomach, weakened, it may be, by

the continued use of medicines ; yet unless the surgeon places it under interdict, it will be found to form a constant article of food, especially at supper. Salt meats, too, are regularly used at breakfast, by a large proportion of our London population, and as they are difficult of digestion, and may exacerbate the scalding, it is as well to prohibit them also. But while a vigorous exclusion of those articles of diet only calculated to do injury may be considered one of the most essential points, it is at the same time advisable not to curb the patient in too strongly, as he is then exceedingly apt to turn restive and break through all restraint ; above all that class of patients who seek to escape by any loophole from the restrictions imposed upon them by the surgeon. The more the directions are simple, exact, and easy to observe, the more readily will they be followed out, both in spirit and letter. Moreover, the greater number do not require such strict dicting, and instances where patients have recovered from severe gonorrhœa, while actually over-stepping all limits, have strongly tended to beget a spirit of scepticism, not only among them, but also amongst medical men, as to their value in cases which really require restrictions.

When we see most surgeons so unanimous in enforcing a restricted diet in the acute stage, it becomes the more difficult to understand why some not only permit, but even recommend the use of stimulating food and drinks in gleet, which, whether purulent or not, seems so far from being the effect of weakness, to be dependent on the continuance of the previous diseased state of the urethra. Nay, if the statements of the patients themselves deserve full credit, these measures have been at least tacitly sanctioned in obstinate clap, merely because the disease had continued unabated with the usual remedies and a restricted diet, or because the patient was tired of the restraint. A proof how vague and conflicting the opinions of men are respecting even the primary articles of faith in our code of treatment.

The surgeon then, I think, will do wisely in totally *interdicting* cheese, beer, and salt meats ; in *directing* as little meat, wine, and spirits, as possible, (the two latter when circumstances admit of it, being always mixed with water,) and in *recommending* to the exclusion of other articles, tea, fish, beef-tea, arrow-root, and tapioca. Nor do I think it safe or advisable to make any compromise with the patient's tastes or wishes ; if he cannot, or

will not, submit to moderate restriction, the failure of the treatment rests with him, not with the surgeon, a responsibility most patients will decline, when the case is placed clearly before them. The progress of science may one day reveal to us some substance capable of exercising more complete control over inflammations of mucous membranes, as potent, perhaps, as tartar emetic in inflammations of the cellular tissue. Then, indeed, we may free our patients from this burdensome watching over their diet; but till then we must combat the disease with such remedies as we possess.

If it be necessary to enforce these rules at the commencement, it is equally so to continue them to the very end; and as gleet discharge is in most cases somewhat purulent, and as hastily reverting to stimulating diet, frequently causes or aggravates the generation of pus, the safest rule that can be laid down is, to continue a restricted diet, till the discharge is totally gone, and then gradually to return to the ordinary way of living. This is, however, widely different from the deprivation of meat when the disease is disappearing, or indeed, abstinence at any period from such an amount of food as is necessary for the due support of the strength. It is the continual use of articles of luxury and of high living, of a greater quantity of food than is really demanded by the wants of the frame, as is constantly done in England, and especially in London, which it is so necessary to struggle against.

In my paper on scalding, I have stated my belief as to the utter uselessness of *diet drinks*, of their inadequacy to relieve, even if they do not tend to aggravate the scalding. Experience has only tended to confirm this view. Where fluid is really required, as at dinner, or in very hot weather, the best drink is water, for many reasons filtered if possible. The habitual thirst under which those most likely to contract gonorrhœa are found to labour, is dependent on a disordered state of the stomach and speedily relieved by attending to this.

One of the things most difficult to reconcile with all sound principles of treatment, is the use of drinks containing acids, such as lemonade, weak punch, decoction of tamarinds, &c., which so strongly tend to induce irritability of the bladder, one of the most disagreeable and intractable complications of the latter stages of the disease.

b. External applications.—For the sake of accurate examination, it will be best to divide these into, 1, cold applications, as ice, evaporating lotions, &c. ; 2, warm, as hot fomentations, baths, &c. ; and 3, sedatives ; and then to ascertain their comparative value, and see if there are any fixed rules to guide us in making use of them.

How far *cold* lotions, particularly as they are generally employed, act beneficially in checking the pain and inflammation and in abating the heat felt in the penis, or in fact, in other inflammations, especially where mucous membranes are implicated, is a question which perhaps a future race of surgeons will be subject to a more vigorous examination before recommending them. I have yet to learn that there is on record a series of observations, in which it was shown by indisputable testimony, that where equal numbers of patients were submitted to the same treatment, those of them who were in addition treated with cold applications, really derived more benefit than the others. Until a fact like this, leaves no resource but conviction I have only the alternative of blindly trusting to doctrines laid down by others, contrary to my own conviction, or assuming what observation would show me ; viz., that they are not only useless but often absolutely injurious ; for they seem sometimes to accelerate, rather than act as a bar to the progress of the inflammation ; to increase the pain and sense of weight in the penis, testicles, and perinæum, especially if at all severe before they are applied ; and finally, they seem to exert very little influence over any kind of swelling.

When the penis can be kept covered with a single fold of linen assiduously wetted with a cold lotion, the heat is rapidly conducted away, and sometimes the penis becomes cool, and the symptoms seem relieved. But then it is difficult to say how much of the relief is due to the quiet, which is at the same time observed, and not one patient in fifty, can, or will, confine himself so strictly to one position, or take so much trouble as this would impose on him.

But applied as these lotions generally are, either with a thick mass of linen, which so far from conducting away the heat, serves only to retain it, or merely used to bathe the penis two or three times a day, it is unreasonable to expect any good effect from them.

With such unsatisfactory testimony of their value, let us see how far their place can be supplied by *hot applications*.

Hot baths, the most comprehensive of these, have been condemned by M. Ricord, as liable to promote the outbreak, or occasion the re-appearance of the discharge, and it is possible that this may be the case with some of the patients seen in the Hospital du Midi; men with constitutions like tinder, in whom gonorrhœa seems the normal state, the rule rather than the exception. This statement made by so distinguished a surgeon, drew my attention to it, but after the closest observation I was capable of giving the subject, I have been unable to confirm M. Ricord's opinion in a single instance.* The patient's health and comfort are very often materially benefited by it, he feels refreshed and lighter, more full of hope, and more disposed to persevere in that prudent, and cautious self-restraint, which is our best guarantee of success.

The only direct application, which I can safely say, has never disappointed me, which is at once, safe, simple, and useful, is that of very hot water to the penis. But to obtain the really good effects it offers, the water must be hot, not lukewarm. In fact, we seldom see so much good ensue, as when it is carried to the extent of producing some excoriation and faintness;† thus applied, and especially in the earlier stages of the disease, the weight felt about the testicles soon disappears, the pain on making water

* In order to examine this, the effects of certain substances in scalding, &c., I had several scores of blank terms like the following prepared and filled up. Cases were selected where the patients were seen every day :—

Name.—G. P.

Date.—Jan. 1, 1850.

Feels.—Better, worse.

Discharge.—Lessening, thick, purulent, &c.

Scalding.—Lessened, increased.

Chordee.—Severe, twice in the night.

Erections.—Lessened.

Bladder.—Irritable, not irritable.

Urine.—Acid, alkaline, &c.

Tongue.—Foul, clean, &c.

Bowels.—1, 2, 3. (stools).

Effects of Medicine.—Has made him sick, has not relieved the scalding, &c.

Effects of Injection.—Gave him some pain for a quarter of an hour.

Effects of Bath.—Made him feel more comfortable.

Treatment.—To be injected by me, Arg. Nit. gr. v. ad ʒi. Use his own injection, continue his mixture, &c.

† I was not aware that this remedy, viz. water so hot as to cause some faintness, was known to surgeons, till I saw it stated in a review of Mr. Acton's work in the Quarterly Journal.

and using injections is soothed, and the prepuce and glans rapidly regain a more normal temperature and colour.

Were it in no way superior in its effects to other applications, it far surpasses them in the greater facilities and convenience it presents. No smell, no mess, no cumbersome apparatus. A piece of sponge, a rag, and a pint of hot water, (things always *really* attainable,) suffice.

This simplicity, on which its value is in some measure dependent, vanishes the moment we essay to increase (?) its efficacy, by adding such things as decoction of poppies, solution of opium, laudanum, &c. If my experience of this disease has confirmed one impression more strongly than another, it is that such messes cannot be too summarily put down. It is really nothing more or less than falling back a century, relapsing into the old barber surgery, and for what object? Solely for the sake of trying anew some useless compound which has failed a thousand times; adding to the patient's discomfort, creating more filth and expense, complicating useful treatment, and wasting useful time.

Nor do I rate the use of any of the *sedatives*, whether used hot or cold much higher. The only thing I have ever seen relieve any of the symptoms was the acetate of lead, used in large quantities, as $\mathfrak{z}\text{ij}$ or $\mathfrak{z}\text{ijj}$, with some acetic acid, in six ounces of camphor mixture, and even this I am disposed to place far below hot water.

So far as my reading enables me to judge, no very satisfactory explanation of the action of heat and cold in inflamed surfaces, has been given out. Frequently, and more particularly, during the acute stage, if the penis be exposed to cold air, an aggravation of the symptoms, and above all, of the chordee comes on, while, when the penis is kept cool and moist, the very opposite result follows. When, again, it is surrounded by hot air, as at night, or too closely covered up, with oiled silk, &c., such a degree of chordee and pain often ensue, that the patient instinctively seeks a cooler atmosphere; and again, if this state of heat be followed by a profuse perspiration, he obtains relief and sleeps sounder. When an inflamed surface, as a breast, is exposed to cold air, an increase of pain is observed; if it be then turned towards the fire relief is felt, but not to such a degree as is experienced if flannels wrung out of hot water be applied. Heat and moisture have the same soothing effect on the penis, which becomes cooler

and less flushed. Are then a moist state of the surface, whether naturally or artificially induced, and the free radiation of the heat, the necessary conditions for attaining this desirable change?

c. Direct applications.—We now approach the consideration of what may be termed the right arm of the service, viz., *injections*. Without them, internal remedies and outward applications are alike slow and unsatisfactory in their working; and, notwithstanding the abuse of them has sometimes led to mischief, and that the most unexceptionable employment of them is in some instances of no avail, the discoverer of injections merits the deepest gratitude of the whole human race, and what he will not obtain, at least in England, a statue and an ovation. Men have been deified and canonised for services less important to the human family, but then *we* live in a more enlightened age!

As the list of injections more or less sedulously recommended to public attention amounts now to some scores, and as the life of man is not long enough to enable one person to examine the virtues of all these substances, it is to be regretted that the subject is not taken up in a philosophical spirit of inquiry by some public institution, likely to furnish us with a series of results from which there could be no appeal; thus deciding at once and for ever what injections were worthless, and what were really worthy of confidence. Their strength, their pathological action, their respective values in different varieties and stages of the disease might also be ascertained with precision, and the practitioner furnished with a clue to guide him through the knotty and intertwining mazes of what is called the treatment of gonorrhœa by injections. But to do this effectually, we want what the world has not yet seen, a School of Experimental Medicine. Then perhaps we should meet with fewer such statements as that “the *watery* discharge of a gleet in persons of ordinary sensibility to irritation is innocuous, but in others may occasion the most violent gonorrhœa;” (Syme;) or recommendations to cure the disease by manna, linseed-tea, &c. (Chelius.)

Till this is done, our *first* choice of injections must be either founded on hypothesis, which, in our present state of knowledge is little better than empiricism, or on the experience of others, which, from the conflicting statements of authors, is more calculated to produce confusion than to promote the progress of truth. A simple appeal to facts would not only place this in a clearer

light than any assertion, but would reveal a diversity of opinion transeending all belief.

The variety of injections indeed is almost incredible, and but for the introduction into the list of nitrate of silver the number might have been doubled.* That many were utterly worthless and deserved the oblivion into which they fell, we can easily believe, and that many more superseded substances of equal value to themselves, is only what we might expect from the capricious and inconstant nature of man, ever prone to quit the path of strict investigation in order to jump at results, and from that very reason adverse to those innovations which have only truth for their support. The desire to gain a name, and also in many instances a true wish to alleviate human suffering, have doubtless had their share in effecting many of these changes.

But even those who reject at once the experience of the past, and ask only to appeal to living authorities, can be scarcely less perplexed if they seek for information at more than one source. If men are divided on the topic of constitutional treatment, they are still more so as regards injections. Thus Mr. Lloyd prefers chloride of zine, Mr. Gay, the acetate; M. Ricord, nitrate of silver, and the occasional use of acetate of lead or zinc, laudanum, or alum.† Mr. Acton, nitrate of silver, sulphate of zinc, and tannin. Mr. Johnson, of Baltimore, nitric acid and strychnine. Mr. Johnson, of London, solution of diacetate of lead; while his reviewer in the *Medico-Chirurgical Review* recommends solution of alum and green tea. Mr. Skey ‡ says, "as injections we may use 5 grs. of sulph. of copper to 3j. of water, or 10 grs. of sulph. of zine to the ounce." Mr. Judd, tincture of steel, sulphate of zine, and nitrate of silver. Mr. Childs, acetate of lead and sulphate of zinc, (thus forming acetate of zine,) with prussic acid and spirit, or nitrate of silver, &c. &c.

But not only do opinions elash as to the best injection, but as to the strength in which it is to be used. None of them, however, have been subjected to such fluctuations as nitrate of silver,

* In 1787, Mr. Nisbett, in his work on the Venereal Disease, published a table containing 38 injections, some of them, however capable of further subdivision, "comprehending," he says, "almost the whole that have ever been used at different periods of this disease."

† *Traité Pratique*, p. 743.

‡ A Practical Treatise on the Venereal Disease, by F. C. Skey, F.R.S.

which has been recommended in every variety, from $\frac{1}{4}$ gr. to \mathfrak{zj} .* up to \mathfrak{Oj} . or \mathfrak{ss} . to \mathfrak{zj} .†

Are not the very number of injections, and their various strengths, proofs strong enough to convince the most incredulous of their inefficiency in a large proportion of cases, whether used singly, or combined with any treatment hitherto devised? Why change any one of them if it really possessed only a moderate share of those virtues, under the prestige of which it was first ushered into the public notice? The question is answered when we see that some of them were recommended on the ground that they had proved useful in three or four instances. Cases are (or were) constantly reported of cures performed by something, the virtues of which were unknown to the profession. The number of cures is small, owing to "the author's limited sphere of observation;" but we are consoled by the assurance that "he will again trespass on the editor's kindness so soon as he has had any opportunity of subjecting more patients to the treatment." No more cases appear, the subject having perhaps died a natural death.

To these hasty conclusions, these inaccurate methods of arriving even at sound theoretical views of the action of injections, are we to ascribe the attempted introduction of such injections as those of chloroform, honey, &c.; things from which no benefit could be reasonably expected.

Of all the injections ever employed, one of those most worthy of confidence is *nitrate of silver*; and as perhaps no substance exercises such a marked influence over so many cases of gonorrhœa as it, I shall at once proceed to examine why it has by some been extolled for its constant success, and laid aside by others for its frequent failures.

. That, when given in strong solution at the outset and in mild cases, accompanied by rest and vigorous treatment, it will often work a cure, few men will deny. In the more favourable instances, a slight gleet only remains on the day after, which disappears in from twelve to forty-eight hours later, under a repetition of the injection, or of some mild treatment. Its value here is greatly enhanced by the circumstance that when it fails, it frequently so far abates the inflammation and checks the discharge, that the disease at once assumes a much more manageable cha-

* Ricord.

† Ballingall's Mil. Surgery.

racter, so that greater progress is often made by the use of one injection, than by the most energetic employment of antiphlogistic medicines, repose, and low diet.

It would only be wasting the reader's time to insist upon the value of such results as these. A rapid, safe, and easy cure of a disagreeable disease, by a cheap, inoffensive, and attainable remedy; freedom from obnoxious complications and results, such as stricture, chordee, swelled testicle, and irritable bladder, are advantages so great that it would be idle to weigh against them the only objection to the plan, the severe pain which follows its application.

And again, when it is not thought advisable to check the disease so speedily, nitrate of silver, used in a milder form in gradually increased quantities, affords the happiest results; under its powerful influence the urethra loses its vivid redness, and assumes a paler or bluish cast; the discharge steadily disappears; the pain on erection and making water subsides, and a rapid and permanent cure is obtained with more certainty and less pain than attends the use of any other remedy. In making this statement, I am borne out not only by the experience of a host of surgeons, worthy in every way of the most unreserved confidence, but by that deep conviction which can only spring from repeated and accurate observation.

But the rock on which it has always split, is its want of success, if not injurious results, in a large number of cases. Not only does it often fail in the hands of the generality of surgeons, but even in those of its warmest advocates, who candidly confess that they are obliged to resort to other injections; or the disease will go on unchecked till perhaps a stricture is formed, or those harassing complications ensue which have gained for gonorrhœa such an evil name. At other times a fixed pain takes up its seat in the under line of the urethra, at some point between the frænum and the front edge of the scrotum, leading to the suspicion that stricture is coming on; and after the most persevering trials the nitrate is given up, as the surgeon can no longer shut his eyes to the conviction that in place of doing good it is doing positive harm.

Even when the discharge has nearly left it will in some unfavourable cases return, and that not because the injection has been left off too soon, for it has perhaps been continued. The fre-

quent mention of this fact leads me to suspect that it is a common occurrence for a surgeon to try and cure a dying gleet by an injection, and instead of effecting this, to produce by that very act an exacerbation of all the symptoms, and a return of the purulent running, sometimes, unfortunately, more difficult to cure than the parent disease.

Nor is its use in the very earliest stages always free from untoward results. It has been charged with causing stricture and swelled testicle, but there seems no foundation for believing that it does so more than other injections: but it certainly sometimes induces a sloughy aphthous state of the urethra as obstinate as almost any gonorrhœa, and which frequently does not put on a favourable appearance till a free purulent discharge has come on and been again subdued.

In the summer of 1849, eighteen patients were selected, who were anxious to be cured at once: they were all injected with a solution of nitrate of silver, gr. x. ad ʒj. A dose of calomel and opium, with a purgative draught, was ordered, and no further treatment till the next visit, when the following results were obtained. (*See Table*, p. 28.)

Could we then at the very first decide whether the cases in hand were likely to be benefited by its employment, and restrict it rigidly to those cases, we should, I think, possess in nitrate of silver the most powerful medium of injections with which we are acquainted. As to whether the patient can or will admit of its being used, that is naturally one of those questions of expediency which are eternally modified by circumstances.

Microscopical examinations, accurate histories of the cases in which it fails, an extensive series of observations instituted for the sole purpose of determining the question, might indeed furnish us with fixed rules for our guidance, but in the meantime we can only base our treatment on simple observation and experience.

Chloride of zinc has lately received the high sanction of Mr. Lloyd's recommendation,* who, after an experience of thirteen years, professes himself better satisfied with it than with any other injection. During the whole of the winter and autumn preceding the appearance of Mr. Lloyd's lecture, I had been engaged for several hours every day in examining the value of certain substances in gonorrhœa. Among these was chloride of zinc,

* *Lancet*, 1850, vol. ii. p. 699.

TABLE OF CASES TREATED WITH STRONG INJECTIONS OF
NITRATE OF SILVER.

Name.	Number of days the disease had lasted.	Symptoms and result.
J. B.	60	Pain, bloody urine, but improvement; still some discharge.
J. N.	90	Pain and scalding lessened. Improvement; still some discharge.
S. B.	270	Much pain and scalding; little improvement.
H. H.	29	Some pain; great improvement; discharge lessened.
J. W.	17	Great pain; discharge much lessened.
E. C.	35	So much pain caused that he refuses to have another injection. Discharge lessened.
J. B.	5	Great pain for four hours after; no discharge to be seen; cure.
G.	14	So much pain that he will not be injected again. The discharge is lessened.
E. G.	14	Great pain; the discharge went away and then returned, but it is lessened.
B.	10	So much pain that he has no desire to have it repeated; speedy cure.
W. N.	18	Great pain; the discharge is gone.
E. E.	23	Discharge almost gone; irritability of the urethra greater; rapid cure.
H. H.	60	Not much pain; the discharge lessened.
H. C.	130	Pain for three hours; the scalding increased; discharge lessened.
R. T.	21	The pain trifling; pain and uneasiness in the penis and scrotum relieved; the discharge almost immediately lessened.
J. R.	5	Great pain; the discharge was stopped, and then slowly returned.
J. T.	2	Lost sight of.
W. H.	42	Lost sight of.

which especially drew my attention by the well marked control it exerts over certain obstinate forms of skin disease. My trials with it, however, completely disappointed me.

The patients on whom it was used were seen daily; they were injected at every visit with solution of chloride of zinc, varying in strength from one or two grains up to ten, and furnished with injections to use at home. They were instructed in the use of the syringe, and diligently questioned respecting any indulgence in diet, drink, or sexual intercourse; while the disease was at the same time combated with aperients, salines, and in some cases

copaiba and turpentine. Finally, every effort was made so to regulate the strength of the injection as to avoid severe pain, while a marked effect, lasting from a quarter to half an hour, was aimed at.

Notwithstanding all this care, more pain was caused than with nitrate of silver or sulphate of zinc, and the disease did not disappear more quickly. In some cases it proved ineffectual, and had to be superseded by nitrate of silver or blistering; in two, stricture sprang up, and some patients left dissatisfied, so that I was induced to give it up; in one or two cases only was it of benefit, when the nitrate of silver failed. (*See Table*, p. 30.)

When used of such strength as only to produce transient pain, no one of the salts of zinc appears to me to possess greater curative power than another, but in respect to the amount of suffering they may entail, when used too strong, they differ more widely; for while the sulphate produces a sharp fleeting pain seldom difficult to endure, that from the acetate is often more severe, and I have sometimes seen absolute torture arise from the chloride, even in weak solution. In the hands of such an experienced surgeon as Mr. Lloyd these results may no doubt be avoided, but the fact which he has himself stated, that its employment should be accompanied by antiphlogistic treatment, and that it is not of so much use when the disease is far advanced, tends to place it on a level with other injections.

Hence I am induced to prefer the *sulphate* as the least painful, and therefore, most proper to be placed in the patient's hands. Closely analogous to it, is the *sulphate of alum*, the only remaining salt with which I have experimented to such an extent as to enable me to speak with confidence of its value. The absence of pain which follows its use, and its feeble curative power, led me to assign to it only a secondary rank. I am indeed, extremely doubtful, if it possess any superiority over very mild solutions of nitrate of silver or sulphate of zinc, and would therefore confine its exhibition to those cases accompanied by severe pain, where it may, during a day or two, serve as a pioneer to the others. The addition of tannin proved in small quantities useless, and in larger ones made the injection so thick as to clog the syringe and sometimes irritated the mucous membrane.

The greater effect which is observed when injections are frequently repeated, led me to hope that if the action of such a salt

TABLE OF CASES TREATED WITH INJECTIONS OF CHLORIDE OF ZINC.

Name.	Days previously ill.	Character of the disease.	Strength of injection.	Treatment.	Results.
J. A.	42	Mild.	grv. to 3j.	Pil tereb. c. stryeh.	At the end of 15 days little improvement.
G. S.	3	Thick pus, severe.	griiss.	Salines.	Swelled testicle. In 21 days discharge gone.
A.	Not marked.	Severe.	Do.	Acet. pot.	No improvement on 25th day. Treated then with purgatives and nitrates. Cured in about 25 days after.
C. L.	1	Do.	griiss. to iv.	Nit. pot. e. p. ipee. co., salines and aperients.	No improvement at the end of 27 days. Left.
C. C.	21	Ordinary.	griss. ad iiss.	Pulv. salin. mist. acid benz.	The plumh. acet. was used for 12 days, and then the chl. zinc, which almost cured him in 2 days. Left not quite well.
J. S.	11	Severe.	griiss. and ij.	Pot. nit. c. pulv. ant. pulv. salin. &c.	Severe pain; discharge disappeared in two days, but returned. On the 31st day still a little gleet.
C. L.	12	Ordinary.	griii. and ij.	Pot. nit. c. pulv. ipee. cac. c.	Gave him so much pain he would allow it no longer.
A. S.	21	Do., first clap.	griiss. ad x.	Sulph. magnes. pulv. sod. e. opil. pulv. salin.	In eight days there was only a little moisture, and this remained ten days after, when he left me. Gr. x. gave only slight pain.
C. G.	4	Severe, second clap.	grj.	Pulv. saliu. pot. nit. c. pulv. ipee. c.	In eight days discharge had diminished, but swelled testicle came on, and he left me.
D. M.	3 to 4 months.	Ordinary.	grviiss. to ii.	Pulv. salin.	Discharge disappeared in 11 days.
J. M.	6	Do.	grii. ad iv. and then to viiss.	Do., pot. nit. mist. salin.	At the end of 37 days discharge still thick, purulent, and greenish.
T. R.	4 or 5	Do.	grj. to iij.	Salines, pulv. salin. mist. eap. c. tereh.	Caustic pastiles had to be resorted to on the 15th day; the cure was somewhat prolonged by his absence for a day or two. Cure in 62 days.
R. L.	Not known.	Very mild.	grij.	Mist. acid heuz.	Left the next day.
S. L.	Do.	Mild.	griij. to viiss	Do. pulv. salin. hark and acid.	Discharge disappeared in 6 days, but a slight gleet came back and lasted 30 days.
W. H.	21	Very severe.		Do. do. pot. nit.	On the 40th day the discharge was still had. He then left.
G. C.	10	Ordinary.	grj. to v.	Pulv. salin.	Disappeared in 8 days.
T. J.	49	Very mild.	grj.	Sod. phos. sod. sulph. and mist. acid benz.	The discharge was nearly gone by the ninth day, when he left.
R. A.	Not marked.	Severe.	griss. to v.	Pulv. salin. mist. pot. chlor. tincture of steel, pot. acet.	On the 20th day he left as had as ever.
C. H.	A few days.	Do.	grj. to ij.	M. acid benz. pot. nit. e. pulv. ant. pulv. salin.	38th day no better. This case was followed by stricture.
W. T.	8 months.	Do.	grj. to v.	Pulv. salin. &c.	Stricture detected on the 75th day.
R. S.	3 months.	Ordinary.	grj.	Pulv. salin., bitters and acid.	The discharge gone in 10 days; a little gleet from time to time.
T. S.	Not marked.	Do.	grv.	Mist. pot. ae. e. rhei.	Left next day.

as the nitrate of silver, could be kept up for some hours, a more speedy cure might be obtained. For this purpose suppositories, containing first a grain, and then half a grain of the nitrate, mixed with gum arabic, were oiled and introduced into the urethra. In the course of from two to five hours they dissolved, but instead of effecting any improvement they either produced no change, or an aphthous state of the mucous membrane, such as is often seen after very strong injections of nitrate of silver, and equally difficult to remove. In some instances they produced such pain, that the patients were glad to remove or expel them by making water. Their utility seemed in the highest degree questionable, and perhaps the idea was founded on false reasoning, as it would seem that the action of the injection continues long after it is withdrawn.

Caustic plug.—Not succeeding with this, I endeavoured to cure some obstinate cases by the use of a strip of calico, moistened in a solution of nitrate of silver. This was gently introduced about two inches down the urethra, by means of a canula and stilet. It certainly cured some cases, but in others seemed to have little effect. As however it is generally painless, safe, and even more cleanly than injections of caustic, and as it can be easily introduced and withdrawn, I will venture to recommend it as worthy of a trial.

No fear need be entertained if by any unforeseen movement on the part of the patient, the calico should slip entirely into the urethra, as it will soon be expelled. One day while I was introducing it, the patient turned suddenly, and the calico was pushed into the canal. I made no effort to recover it, and the next day he called to say he had seen nothing of it, nor could it be detected by external examination or the use of the bougie. As he had always made water quite freely, I comforted him with the assurance that it had escaped from the passage, and slipped out of his dress unobserved, or been forced out with the urine. A few days after precisely the same accident occurred; I requested the patient to call again if anything showed itself, or if he had any difficulty in making water. In two or three hours he re-appeared with the plug in his hand; he had found it in his trousers, and its escape in subsequent cases in which it was introduced an inch and a half down the urethra, and then cut off close to the meatus, convinced me that this is the way in which it generally makes its exodus.

Cases treated with the caustic plug.

Case 1.—J. D. has now, May 14, 1850, had gonorrhœa for upwards of five months, 77 days of which, he has been under my hands; progress much retarded by his excessive eating and drinking. The plug was used twice successively, and at once brought down the discharge to a slight gleet. June 20; he has continued well.

Case 2.—C. has now been under treatment 24 days; treated principally with nitrate of silver injections; the plug was applied seven times. Cure, but considerable pain and chordee caused by it at first.

Case 3.—J. N. came to me, April 25, 1850. He has been long under treatment, and all the ordinary remedies have been employed, but his intemperate habits have prevented his getting well. Mist. Pot. Iod., and Inf. Rhei. Calico plug.

May 8.—The plug has been twice employed, and each time has checked the discharge for two or three days. Apply it again.

May 10.—He is so much better, that he thinks this is the only thing that ever did him any good. Apply it again.

May 14.—The soreness of the urethra quite gone, some little discharge; apply it again. This cured him.

Case 4.—W. S. applied to me, Feb. 17, with severe gonorrhœa. The acetate of potass was ordered, in combination with liq. potassæ and pulv. rhei. Injections of nitrate of silver, and sulphate of zinc. He did not attend or continue the treatment very regularly. In the beginning of March, not finding him much improved, the caustic plug was introduced six times. In nine days there was apparently complete cure, but he now left off attending, returned to his old habits which were rather dissipated, and I learnt subsequently that a gleety discharge hung about him for some time.

Cauterizing the Urethra, I have only tried in a few cases, and in all, though very gently applied, severe pain was given, and no *permanent good* resulted. That ten succeeding cases might have been at once cured by the application I can easily believe, as well as that it is a remedy of high value, offering a powerful action with really less pain than a very strong injection. But I appeal to the experience of those who have used it extensively, if they are prepared to recommend it, except as a last resource, and if its

employment is not attended with inconveniences too serious to be overlooked. Perhaps with some modifications, and under certain circumstances, it might be used where a blister had failed, or could not be applied.

There are many more remedies (?) which it would be only sheer loss of time to notice, such as attempting to cure an acute gonorrhœa by passing a bougie once into the bladder; an excellent way, by-the-bye, if the patient does not previously make water, of forcing the purulent fluid further down the urethra, and so probably increasing the extent of the disease. A cure made in this way is sometimes announced with the threatening intimation, that the discoverer means to try this plan with the next gonorrhœa patient who may present himself.

No more is heard of these attempts as they lead to nothing. Crude unfortunate abortions, hurried into the world long ere their time; dying before they can be well said to have lived. Charity forbids us to disturb the oblivion into which they have fallen.

In order, then, to bring into as narrow a focus as possible, the arguments for and against the treatment hitherto used, I shall endeavour to reduce all I have said to a few aphorisms.

1. That the remedies enumerated, though adequate to cure by far the greater number of cases, yet leave many unrelieved.

2. That some of them are disagreeable, some dangerous, and some futile.

3. That there are no rules laid down to guide us in distinguishing at the outset those cases which are, from those which are not, amenable to these remedies, the divisions given by Eisenmann, Swediaur, &c., having no bearing on this point.

4. That where so large a list of remedies is given, some attempt ought to be made to decide exactly in what cases certain of them should be tried, which has not yet been done, thus making the cases obtained but a blind chance, only calculated to mislead, and forming no basis for future operations.

5. That the reputation of injections has been injured by no certain rules being established as to the relative value of the different substances recommended, or the strength in which they ought to be employed in different individuals; thus leading to the indiscriminate application of many different substances of different strength to the same case, or the equally indiscriminate

application of injections of the same strength to cases not equally fitted to bear them.

6. That treatment has been made secondary to disputes about the nature, sources, and history, of this disease, whereas the cure ought to precede all other considerations; for, however great the value of science, the welfare of man is a still greater object to every well regulated mind.

I have spoken plainly on this topic. To say as has really been said of some remedies, that they are all but infallible, and in the next breath, to admit that the disadvantages attending their use outweigh the advantages, is worse than the vacillations of a Greek chorus; it is playing fast and loose with the essence of things. If I have erred on the other side, it has been solely with the view of bringing out as prominently as possible the real state of the question.

Proposed plan of treatment.—Gonorrhœa, when we come to consider its treatment, resolves itself naturally into two classes, the mild and the severe. I shall, however, take the liberty of dividing them in a purely artificial way, into those admitting, and those not admitting, of abortive treatment.

Under the former head I class 1, those cases which present themselves before much pain and running have set in: 2, those of patients who have had gonorrhœa previously, and in whom it may be presumed, that the excitability of the mucous membrane is much diminished: and 3, those in which the patient is desirous of obtaining an immediate cure, and where the symptoms have not reached such a height as to crush all hope of obtaining it.

And before going into the details of this method I must digress for a few minutes to combat an opinion which I am inclined to think is very prevalent in England, and that is, that M. Ricord is constantly in the habit of using abortive treatment; or, in other words, of preluding every measure by one strong injection of nitrate of silver. Nothing could be wider of the mark. M. Ricord's abortive treatment, as laid down in his "*Traité Pratique*," consists of rest, low diet, 30 or 40 leeches to the perinæum, followed by copaiba, and *mild* injections of nitrate of silver, confining his recommendation of a strong solution of this salt to those cases which begin "without pain, without any sign of inflammation." P. 709. The plan I am about to propose comes nearer that of Mr. Acton, than any other I am acquainted with.

Before taking a single step, it is indispensably necessary to ascertain whether the patient can rest for the entire day after, and if not, whether he is prepared to suffer considerable inconvenience. If he is not in a position to do either, it is best at once to lay aside all thoughts of an abortive cure, and refer the case to the second class.

But when this co-operation on his part can be obtained, the abortive treatment may at once be commenced. The patient should make water, and the surgeon then injects him with a solution of nitrate of silver, containing gr. v. to \mathfrak{z} i. of distilled water. The tube of the syringe ought to be an inch and a half long, so that the whole of the specific seat of gonorrhœa is acted on, and consist of platinum or silver electro-plated, as otherwise the salt soon acts on it, corroding the point and making it rough.

By limiting the strength of the solution to five grains, we avoid the severe pain which is caused by the strong solutions of this salt, and by retaining the injection in the urethra for several minutes, we can in almost every case attain equally as powerful an effect as by using a stronger solution, when only kept in contact with the mucous membrane for a few seconds. Should it, however, fail to cause either burning or smarting, which seems essential to the effect desired, it is to be withdrawn, and followed by a solution of gr. x. to \mathfrak{z} i. which will always be found sufficiently strong.

The deep burning pain which now ensues, is widely different from that produced by the salts of zinc, and is often accompanied by flushes of heat, which thrill through the frame. It is, however, soon relieved by bathing the penis with hot water, and a hot bath will effectually remove what the bathing may have failed in doing.

The next step is to prescribe a large dose of calomel, at least 4 to 8 grains, regulating its strength by those circumstances which modify all individual cases, followed by purgative draughts every two hours, until several loose stools are procured. The bowels should be completely scoured out, and no food allowed, except a little warm tea or gruel to assist the action of the medicines.

After every stool, the patient should inject with a solution of sulphate of zinc, gr. iii. or gr. v. to \mathfrak{z} i., and to ensure uniformity of strength, the crystallized sulphate and distilled water should

be prescribed. The injection is each time to be kept in contact with the mucous membrane till a slight sense of burning is produced, when it may at once be withdrawn.

So soon as this is done, the penis is to be bathed with water as hot as it can be borne till the skin is quite red; and the greater the heat the more complete the relief, not only to the pain produced by injecting, but also to the scalding and symptoms strictly attendant on the disease.

The next day the discharge is generally thin, and very small in quantity; the symptoms of inflammation have disappeared; and the cure is completed in a day or two by the use, every time the patient makes water, of an injection of sulphate of zinc, rising in strength up to gr. x. to \mathfrak{z} i.; mild aperients, and low diet. Where this fails the case may be referred to the second class, and treated as severe gonorrhœa; for I believe, that abortive treatment to succeed at all, must succeed at once.

Cases treated abortively.

Case 1.—A gentleman who had suffered severely in a preceding attack, called on me with a gonorrhœa he wished to have cured at once at all hazards. An injection of nitrate of silver was given, gr. v. of calomel, followed immediately by purgatives, rest all day in bed, and no food. He was completely cured, no more discharge having appeared after the next morning.

Case 2.—Mr. W. called Jan. 21, 1850, with a recent gonorrhœa, wishing to be cured immediately. Injection and purgative, followed by a hot bath. He was most obedient to these directions, and the discharge entirely disappeared by the end of forty-eight hours.

Case 3.—J. B., severe gonorrhœa. After fully explaining to him how he would have to assist me, I applied the strong injection, hot fomentations, bath, and starvation. He religiously executed all that was enjoined, passed the greater part of the day in going to stool, and giving himself injections, and was cured in thirty-six hours.

Every other case of gonorrhœa, every case in which the abortive treatment has failed, or in which it cannot be applied, and every case accompanied by excessive pain, susceptibility of the urethra, or of considerable standing, and attended by fixed pain on the under surface of this canal, I would place in the second class.

It is to these that I wish to apply a new treatment, substituting for all internal remedies the salts of potass and rhubarb ; using hot water in lieu of any outward application, with injections so combined, graduated, and applied, as to act permanently, without pain, and over the *whole* diseased surface.

Convinced by experience of the inutility of using iodide of potass alone, and finding that liquor potassæ in sufficiently large doses was apt to disagree with the stomach, the acetate was substituted in the hope that the same quantity of the alkali might be conveyed into the blood, while its less caustic nature and greater powers as a diuretic, would alleviate some of the disagreeable effects resulting from the prolonged use of liquor potassæ. When used alone, constipation always ensued to such an extent as to neutralize any good effects it might have produced, and it was not until I combined it with rhubarb that I made any progress.

Having seen the effects of the chlorate of potass, in diminishing the heat and redness of inflamed parts, I was induced to test its action on the inflammation of gonorrhœa, but though it exerted a visible influence over it, yet this was by no means commensurate with what previous experience would have led us to expect. Its want of solubility, too, was a great bar to its employment, as even when dissolved in boiling distilled water, a great portion of the salt crystallized after cooling on the sides of the bottle. This I attempted to alleviate by the addition of hydrochloric acid, without effect, however, as the potass seems the soluble element ; but the addition of liquor potassæ to any great extent, failed in effecting the solution of more than an ounce of chlorate of potass in an imperial pint of distilled water. To add to these inconveniences, it was found that on the approach of cold weather, the salt even in this proportion once more became insoluble. In fine, it was not till after numberless trials and disappointments, that I discovered that the only way to obtain a certain and valuable action from these salts, was to unite the solutions of the acetate and chlorate with the liquor potassæ, with the occasional use of the chlorate, in the form of powders ; or to combine the acetate with the sweet spirit of nitre.

The solution I now employ, is formed by pouring ℥v. of boiling distilled water on ℥ij. of powdered chlorate of potass, and then adding ℥iij. of the liquor potassæ, and ℥iij. to ℥v. of the acetate ;

after this it is filtered. This fluid I have ventured to call the compound solution of potassa, (liq. potass. comp.*)

When one of these solutions is taken in doses of $\mathfrak{z}\text{i}$. two or three times a day, a visible effect is had on the discharge, the diminution of this being very marked in the course of twenty-four to forty-eight hours, the purulent running becomes thinner, loses its yellow colour, and grows starchy. This effect seems to be produced with equal rapidity in cases of long standing, and quite recent ones; in women and in men; and even in those cases in which large portions of concretion almost like coagulated albumen, are thrown off from the mouth of the womb; so that I look upon potass as one of the true antiphlogistics in inflammation of the mucous membranes.

In order, however, to obtain its full effects, and to prevent its action being obstructed by the constipation generally present, it must be given in combination with rhubarb.

The dose of this, respecting which no pains should be spared to obtain it pure, ranges from gr. v. to $\mathfrak{z}\text{i}$. In every case it is to be sufficient to produce two or three loose stools every day, but not more, or the patient considering his bowels open enough, will not take sufficient quantities of the potass. The addition of some camphor is necessary when there is any chordee in the day time, but where this disagreeable symptom is completely absent, tincture of ginger or cinnamon may be substituted, some carminative being always requisite to obviate the griping pain which often arises. The essence of camphor, which contains forty-five grains to $\mathfrak{z}\text{i}$., and is perfectly miscible in water, offers an excellent medium for its exhibition. It is, I believe, a patent medicine, but easily procurable.

In cold weather the chlorate may be powdered, and given in $\mathfrak{z}\text{ss}$. doses, along with the mixture, or a larger quantity of fluid may be used for its solution, and as $\mathfrak{z}\text{ss}$. is a small dose, it might be of service to institute a series of inquiries with a view of determining what doses are in certain cases best calculated to act on the disease.

These medicines I have now used a long time without seeing any ease resist their influence, except, *a.* when there was some

* The solution of the subacetate formed by adding $\mathfrak{z}\text{vj}$. of the acetate, and $\mathfrak{z}\text{ij}$. of the liq. potass. to $\mathfrak{z}\text{vj}$. of camphor mixture, and the combination of $\mathfrak{z}\text{i}$. of the acetate, and $\mathfrak{z}\text{ij}$. of sweet spirit of nitre in the same quantity of fluid seem closely allied to this in their action.

stricture, or that tight irritable state of the urethra in which it seems constricted for about an inch of its extent; *b.* some cases of long standing where strong injections had been used, and where there was a fixed pain on the under part of the urethra, generally near the frænum, but sometimes obscure as to its true seat. Even these cases have always been materially benefited by them, but naturally enough the cure has not been effected without recourse to further measures.

Their use has always been attended with much less elhordee, and has in no single instance been followed by irritable bladder, or swelled testicle. It may be urged that this is owing to my having had a peculiar run of cases, but to this I reply,

1, That in the same number of cases treated under the old method, I never failed to see irritable and swelled testicle more or less.

2. That during this time the atmospheric conditions which tend to accelerate their outbreak, seem to have been present, as cases have occurred in the practice of other surgeons.

3. That patients whom I have treated thus have been attacked with these complications, at a distance from London while under other treatment.

4. That I have lately only treated two cases with copaiba, and that one of these *was* attacked with swelled testicle.

Be that as it may, the medicine seems certainly to have a powerful effect on the inflammation and running, the sole subject of consideration here, for I propose to examine separately the nature and treatment of each complication, and has even cured the greater number of cases of gleet subjected to its action. In the course of a day or two, the tongue becomes clean, the breath sweet, the appetite, if disturbed, regains its tone, and the patient feels lighter and easier. If persevered in too long, however, the liq. potass. comp. seems to disorder the stomach; and here I would recommend the acetate with spirit of nitre. When a case of gonorrhœa resists its influence, the surgeon may, so soon as he has satisfied himself that it is not complicated with stricture, either spasmodic, or organic, consider it as a gleet and treat it accordingly.

Of all the other remedies, there is but one I should recommend, where this plan properly aided by injections fails, and as I believe it to be unknown, that is, as regards the amount of liquor

potassæ and the form of combination, I shall give it here, premising, that to obtain its effect it must be taken in all its integrity; that copaiba, one of the most nauseous of drugs, forms one of its ingredients, and hence, that it seems best to prescribe it only for those who do not object to it, and not to persevere in giving it if it do not at once effect a marked change for the better. It is—

R Bals. Copaib.

Liq. Potass. aa ʒiij.

Mucil. Acac. ʒi

Aq. Menth. fort ad ʒvj. ʒi. ter die.

In some cases the decoct. pareira brava may be very advantageously substituted for the aq. menth.; and again, in some, I may add, I have seen advantage from the use of the eubebs, taken along with the potass mixture.

Here, as in fact, in every other disease, it is of the utmost importance, that the remedies be as few and as simple as possible, in order that we may know what we have to trust to, and that we may be able to alter the dose, so as really to keep pace with the symptoms; that every remedy should be in itself vigorous, indispensable, and easy of application; but, in a disease so obstinate as gonorrhœa, it is sometimes equally important that every remedy possessing any active influence should be brought to bear on it.

So long as heat in the penis and scalding trouble the patient, so long should he resort to the frequent use of hot water, in the way mentioned in speaking of the abortive treatment.

In far the greater number of cases, this treatment will not succeed unless seconded by injections. In order to make the action of these as powerful and perfect as possible, care must be taken: 1. To select a salt or salts of such a strength, as really to act on the mucous membrane. 2. To apply it over the whole of the diseased surface. 3. To see not only that it is really acting on the disease, but also producing no injury.

However desirable it might be to obtain a continuance of the good effects which result from the use of nitrate of silver, yet its action is so great that it is unsafe to trust the patient with it, lest from anxiety to hurry on the cure, or from ignorance of the symptoms which reveal that it is acting injuriously, too free use be made of it: for its use may be followed by spasmodic stricture,

or a pain will fix in the urethra, which, whether it be from an ulcer or not, betokens a state most difficult to cure, and often lasts for months, accompanied by some purulent discharge, unless blistering be resorted to. The aphthous state, too, of the mucous membrane, more than once alluded to, may ensue, and prove very troublesome.

Besides this, it stains the patient's hands and linen,* the floor, carpeting, &c.; it requires another syringe, and a complete injecting apparatus; and as it seems, when of such a strength that the patient may be safely trusted with it, not more efficacious than the sulphate of zinc, I must join in Mr. Acton's recommendation that its use be confined to the surgeon's consulting room.

Here, then, I would recommend it to be given every day, or second day, especially at the commencement of the disease, beginning with a solution of one to three grains to the ounce, according as there seems much or little pain; and then at every succeeding injection adding one, two, or three grains of the salt, till it is raised to a strength of five to ten grains, beyond which I would on no account go.

There is one golden rule by which the practitioner may be guided in choosing which of these varying strengths he will employ, and that is, that the injection is only to be brought up at each visit to such a strength as to produce slight pain for a quarter of an hour or so, followed by some degree of heat for a short time. Unless, therefore, the surgeon's memory be extraordinarily retentive, the only sure plan is to make a note at the patient's first visit, and keep it regularly scored up.

Where this injection has, by any oversight, produced a greater amount of pain than was intended, where the patient has been using too strong injections previous to his first visit; where there is the least reason to suspect that organic stricture is coming on; where the fixed pain on the under line of the urethra is setting in with aggravation of the symptoms; where there is an aphthous state of the urethra, or discharge of blood, or bloody serum, it is better in all cases to suspend injections, or use them extremely mild till these symptoms subside, when they may be resumed.

In conjunction with this, sulphate of zinc may be used by the patient himself, commencing with two grains of the crystallized

* These stains may be easily removed by a solution of fused cyanide of potassium.

salt to the ounce, and increasing it gradually up to ten grains, and in some rare instances to fifteen.

Like the other injections, this should never be carried to the extent of producing severe pain; the utmost that is required is a slight sense of burning for ten or fifteen minutes. But if it is to be of any service, this degree of action *must be attained*, however strong a solution may be required. The urethra sometimes becomes in obstinate cases able to bear injections of extraordinary strength, and in some long standing cases of gonorrhœa in women, I have used a solution of ℥j. of the sulphate to ℥j. of water, not only with impunity, but even with the best effects. Hence, in order to obtain a strength always adequate to produce a proper action, it is best to prescribe it in small quantities at a time.

The patient should always make water before injecting, and with a little perseverance he will generally be able, after an effort or two, to evacuate some fluid from his abdomen. When this precaution is taken, not only do we avoid the hazard of seeing the injection carried away by the stream, but also of its being prevented by the purulent discharge from coming in contact with the mucous membrane; and finally, we ensure greater regularity in the use of the injection if we request the patient to inject every time he makes water.

The addition of five minims of spirit of camphor to each ounce of the solution, seems to increase the efficacy of the injection. Whether it acts *per se*, or only mechanically, by entangling the fluid and retaining it in contact with the mucous membrane, I will not venture to say. I never could learn who first suggested this plan, but I am disposed to think it extremely useful.

However important it may be to regulate exactly the strength of the injection, it is equally indispensable that the fluid should come in contact with the *whole* of the diseased surface, and that a *proper quantity* be injected.

To effect this, the pipe of the syringe must be at least one inch and a half long. Unless this precaution be taken, injections may be used for months without really reaching the seat of a great deal of the purulent running.

All the syringes I have ever seen are far too long, and contain too much fluid. They are exceedingly difficult to manage, from their great size. It is not every one that can stretch his hand to

such an extent as to reach the *knob* of the piston, and at the same time grasp the syringe firmly. The piston generally fits badly to the cylinder, so that a great deal of the fluid escapes backwards; or if this be obviated, the patient injects far too great a quantity, thus causing unnecessary pain and distension in the interior part of the canal, to which, perhaps, much of the mischief said to have been caused by injection might perhaps be attributed.

In order to obviate these defects, I had some syringes made* of a totally different construction from any I have seen; the cylinder and piston are not above half the ordinary length, so that it can be used with great ease. The cylinder, when the piston is in, contains at the utmost ʒiss. of fluid; the pipe is made of silver, and in accordance with the presumed seat of the disease, an inch and a half in length, quite smooth, and equal to a No. 6 catheter in diameter. The cylinder should always be of glass, even where expense is not an object, and more costly material might be considered necessary, in order that the patient may be sure it is properly charged with fluid, or else he may chance to inject only air; and in order that no fluid escape backwards, the cotton surrounding the piston should be overlaid with worsted, which allows the piston to work only stiffly.

With this syringe any patient can inject over the whole of the diseased surface; the penis is grasped at the glans and drawn into a straight line, the syringe introduced, and the piston pressed slowly down. As the fluid is pressed out, the syringe should be withdrawn, in order that no part of the urethra may be immoderately distended. The glans should be kept firmly in contact with the syringe till this is removed, and then compressed at the meatus, so as to retain the fluid till it produces the desired effect, which in the later stages will often not ensue in less than three to five minutes.

Where the surgeon desires to leave nothing to chance, to gain the patient's confidence, and accelerate the cure by every means in his power, he will at the very first sitting satisfy himself that the patient is really able to use the syringe. No directions will ever take the place of this, and though many patients seem very soon to comprehend what are the necessary conditions for proper injecting, still I have seen too many cases in which persons, con-

* By Mr. Lings, of Jewin Street.

fidest they could inject themselves, were unable to do so, or where the patient candidly confessed his inability, ever to omit it again.

When the first injection has been given, the surgeon can instruct the patient as to the best way of preventing the discharge from marking his linen. All oiled silk bags, thick wrappings, &c., heat the penis too much, and perhaps dispose to chordee. The simplest and lightest application I know of is the following; a piece of thick lint, half an inch square, is placed on the orifice of the urethra; the end of a strip of bandage, a foot long and an inch broad, is then laid on the under surface of the penis, carried over the lint to the upper surface of the penis opposite to where it was first applied, turned on itself, and carried twice round. It may now be kept on by a thread of worsted or a thin ring of galvanised Indian-rubber. An old towel or napkin offers an excellent material for a bandage, and the lint may be renewed whenever it is dirty.

Mr. Child recommends sponge instead of lint, as this confines the discharge, which he considers injurious. A strip of sponge, he says, "can be readily introduced by the aid of a small gum elastic bougie, and it need not reach further down than two or three inches from the mouth." No doubt it can be readily introduced *by a surgeon*, but as very few patients could or would attempt such a proceeding, the application of this method becomes extremely limited.

It is in our day needless to say that it is totally unnecessary to compress the penis low down in order to prevent the injection passing too far into the canal. Sir C. Bell not only did this, but used leather shields to prevent the syringe going in too far, though he recommended that the canal should be *distended* with the injection. Mr. Syme says the penis should be pressed between the finger and thumb "*at the neck of the glans*, to prevent the fluid passing further back than this, which is the limit of the disease!!!"* In some cases of gleet the urethra may require distending injections, but the pressure must be applied lower than the neck of the glans; the great difficulty is, to

* Yet in the very same page he tells us that abscesses form exterior to the urethra; the prostate and bladder take on a *similar* diseased action. It is only charity to suppose that Mr. Syme forgot to correct this part of his work, where each dogma flatly contradicts or modifies the others.

get it in far enough. When the urethra is very irritable, the fluid is often driven out as soon as it is introduced. Nothing but the most unjustifiable violence could send it too far, and the pain felt down the urethra arises from this canal being over distended, or from too strong injections being used.

Some patients are morbidly afraid of injections; some are endowed with such extreme sensibility of the urethra, as at first not to tolerate even the weakest of these salts; and others, again, faint on the introduction of the syringe, and hence object to its being used a second time.

Here, then, the surgeon should place the choice of evils plainly before the patient, and point out to him what may result from allowing the disease to run its course unchecked. The injection should be used at first only by the patient himself in the surgeon's presence, and should consist for a day or two of warm water, at the end of which time the irritability of the urethra, or the fear of injections, will probably have so far subsided that nitrate of silver may at once be begun with. When the tendency to fainting is well marked, the injections are best used with the patient seated in an arm-chair.

One rule I would lay down as a maxim from which we should on no account suffer ourselves to depart, and that is, that the action of our treatment should be regularly gauged, if I may so express myself, and that *we should never rest satisfied unless daily progress is made towards a cure.*

But this is not to be done by an incessant and aimless change of treatment, under the supposition that the urethra or the system is so accustomed to the remedy that this will no longer act, and that another will have the same or a better effect than if used at first. Where really efficacious measures have failed, we may generally rest assured that there is some complication, some faulty point, which requires at once to be ferreted out, at whatever expenditure of time and trouble. To leave the disease to wear itself out, to recommend change of air with this view, is virtually to abandon the case, and thus confess our inability to cope with it.

If the stomach be deranged, and the tongue continue foul, the use of acids and bark, as tincture of cinnamon and gentian, with dilute sulphuric acid, will often relieve these symptoms and hasten the cure; where the bowels or liver are sluggish, mild doses of

ealomel or blue pill may be used. But the possibility of good arising out of these measures should not exonerate us from the necessity of at once taking further steps, or lure us to delay; it is but one branch of inquiry out of many.

When a long standing case is brought to the surgeon, and it is found that no impression is made upon it by this treatment, fairly kept up for two or three weeks; when, in a recent case, after the same space of time the disease does not seem to be giving way; when, after putting on the semblance of a cure, the disease steadily returns and grows worse; when there is a fixed pain on erection, the urethra should at once be sounded, to ascertain with certainty that there is no stricture, either formed or commencing.

And here it is not enough to rest satisfied with passing a moderate sized bougie, unless this at once reveal a contraction of the canal. A full sized wax bougie should be used in order to detect the first rudiments of stricture, if any exist, as otherwise this may not be noticed, and go on until some months after the surgeon finds to his surprise that complete stricture has formed; or still worse, the patient may go to some other practitioner, who on hearing the particulars, at once tries a high number bougie and thus gains a clue to the treatment. When any stricture is detected, it is needless to say that medicines and injections may be laid aside and the urethra dilated without further delay till it has regained its natural size, when the running will cease.

When the case is complicated by inflammation in the proper tissue of any of the structures surrounding the urethra, and especially in the membranous and prostatic portions, as evidenced by pain in crossing the legs, weight and fulness in the perinæum, it becomes imperative to institute an accurate search for the seat of these symptoms. When these are not dependent on stricture, hot bathing to the perinæum, and the free use of tartar emetic, in half grain and grain doses, with \mathfrak{zss} . of tinet. of hyoscy. in draught, every two or three hours, will soon reduce the inflammation and relieve the pain.

Having failed, then, in this treatment, and in detecting any complications, or indeed anything in the history of the case which might make it necessary to go further than I have said, I would refer the case to gleet and, notwithstanding so eminent a surgeon as M. Rieord has given his opinion against it, blister the penis without delay. The pernicious consequences which seldom

fail to wait upon neglected gonorrhœa, would be alone ground enough for such a step ; but when we add to this that sooner or later the disease must be cured ; that a gonorrhœa which does not yield in three weeks may very likely be as bad at the end of three months ; that all this time the surgeon is periling his reputation, and the patient his chances of cure ; no objection or argument should turn us from the fixed resolution of resorting to the only feasible means of obtaining a quick and complete cure.

The only step I would at all allow to detain me, would be a wish to give a trial, *for a few days at the utmost*, to the mixture of copaiba and liquor potassæ, with the use of the caustic plug, which should consist of a piece of calico or linen one and a half inches long and three lines wide. It is to be steeped in a solution of nitrate of silver, gr. x. or gr. xv. to ℥j., and introduced, after an injection of the same salt has been thrown in, an inch or so down the urethra ; this can be done only by means of a thin piece of hollow bougie, open at each end ; a probe carrying the calico is pushed down the bougie till it protrudes at the end.

Where the fixed pain exists on the under part of the urethra, it is often not relieved until free suppuration has ensued, or blistering has been resorted to, for it would seem as if some parts of the urethra were capable of remaining for a long time in a state similar to that of simple inflammation before suppuration has set in, and where pain precedes suppuration, unless resolution be induced.

Discharges, whether gonorrhœal or leucorrhœal, from the mouth and neck of the womb and vagina, seem equally amenable to this treatment ; the greater difference being in respect to the injections. In women it may be said, so far as my experience allows me to decide : 1. That injections of nitrate of silver are not so often called for as in men. 2. That injections give, even when very mild, great pain to some women, and hence that it is better to begin with injecting warm water. 3. That they can in some instances be carried to an extraordinary height.

As in men, it is always advisable to secure *an effect* from the injection. The pain in the loins I have found better relieved by counter-irritation to the parts affected, than by drugging the patient with sedatives. Change of air may be indeed recommended when the cure is complete, but I imagine few cases, if uncomplicated, require it.

Were I required to sum up the treatment recommended in gonorrhœa, I should say,

1. Try abortive treatment, consisting of

a. Injections of nitrate of silver, hot bathing, calomel, and black draught, followed immediately by

b. Mild injections of nitrate of silver by the surgeon, and sulphate of zinc by the patient himself; a few doses of the mist. pot. acet. and rhei.

c. If this fail refer the case to

2. Curative treatment, consisting of

a. Injections of nitrate of silver, and sulph. of zinc, used at the same time, and applied over the whole of the presumed seat of the disease.

b. Mist. rhei. and pot. acet., or liq. potass. comp. with aromatic water.

c. The chordee at night to be relieved by the use of the spirit of camphor; that in the day by the essence added to the mixture. Bitters and blue pill when the stomach is foul, and the liver sluggish.

d. Hot water to the penis; restricted diet; abscesses to be relieved by the tartar emetic and hot water.

a. In a few cases copaiba, cubebs, and caustic.

b. A rigid search after complications, and

c. If these are not found, delays are not to be permitted.

Refer the case to

3. Gleet.

Cases.—I will now proceed to illustrate this treatment by brief histories of a few cases. However desirable it may be to describe them in full, as we can then more readily discern incorrect and contradictory facts, there are yet limits to details which I cannot allow myself to transgress. While engaged in examining the real influence of many remedies in gonorrhœa, I collected and classed a mass of cases sufficient to fill two or three bulky volumes. With such materials as these, aided by a few quotations, description of symptoms, &c., a tolerably large work might have been prepared, equally bare of interest or value to the reader. And even were I to quote the few cases I shall select at full length, it would, I fear, try his patience too severely.

Cases treated with Liq. Potass; or Potassæ, Iodid., &c.

Case 1.—Gonorrhœa of 18 months' standing; had been treated with copaiba and injections. R. Mist. liq. potass. c. rheo. ʒi. ter die. Graduated injection of nitrate of silver. Cure in 10 days.

Case 2.—Mrs. C., gonorrhœa of some months' standing; discharge thick. R. Liq. potass. ʒss. ter die, and zinc lotion. Cure in 12 days.

Case 3.—Mrs. K. had been treated 6 months for gonorrhœa, and had used copaiba and injections. Jan. 15, 1851.

R. Liq. Pot. ʒijss., Pot. Iod. ʒi.

P. Rhei. ʒij., Mist. Camph. fort ʒvj. ʒj. ter die.

Injections of hot water, followed by

Solution of Sulph. of Zinc.

28th. Left just cured.

April 3. Re-appeared with purulent discharge. Same treatment followed by turpentine pills and quinine, in mixture. On the 5th of May, the cure had been completed some days.

Case 4.—Mrs. P. has had gonorrhœa ten weeks.

Jan. 4, 1851.

R. Liq. Potass. ʒss. bis die.

Feb. 10. Improving. Cout. liq. and use sulph. zinc. 20th. Liq. potass. and inf. rhei. 26th. Obligated to go into the country; returned two months after with a slight discharge still upon her. Cured in less than 3 weeks by the same treatment.

Case 5.—A servant girl had gonorrhœa for 18 months, and used no treatment. She then left her situation to get cured, and placed herself under my hands.

R. Pulv. Sod. et Opii bis die.

Lotio Zinc.

This produced pain, and then came on intolerable itching, and an attack of prurigo pubis; a small abscess formed in the left labium. The liq. pot. was now begun with ʒss. ter die, increased afterwards to 40m. On the 23rd day from her first visit she was cured, and had been so some time.

Cases treated with Potass., Acet., &c.

Case 1.—Oct. 2, 1850.—Mrs. S. had been under treatment five

years, complaining of pain in the left ovary, swelling of the abdomen, and discharge. On examination, a large mass like boiled white of egg was seen adhering to the mouth of the womb, which was red and puffy.

R. Pulv. Rhei. ʒj., Pot. Acet. ʒiv.

Sp. Ether. N. ʒij., Aq. Menth. ʒvj. ʒj. bis die.

P. Ipecae. co. gr. x. Hyd. Chl. gr. ij.

Warm water Injections, &c.

By the 16th, the discharge had ceased, and never returned, though she was long under my care for pain in the side, and vomiting of blood.

Case 2.—Oct. 15, 1851.—A. W. had had gonorrhœa 2 months; it had been treated with pulv. sod. e. jal.; inj. of acet. of lead, no restriction in diet.

R. Pulv. Rhei. ʒij., Pot. Acet. ʒiij.

Sp. Ether. N. ʒij., M. Cam. ad ʒvj. ʒi. bis die.

Graduated Injection of Nit. Silver, and Sulph. Zine.

Discharge disappeared in 7 days, then returned, perhaps from leaving off the treatment, and ceased entirely on the 17th day.

Case 3.—M. Q., disease of 6 days' standing, admitted Nov. 6, 1850. Treated with aperient pills, and sulph. zinc injection. Improvement to the 14th, when the mist. pot. acet. and rhei. was begun with, and graduated injections. Cure by the 16th.

Case 4.—Sarah H., admitted with gonorrhœa of some weeks' duration. This was one of my earliest cases, and was treated with ʒi. doses of pot. acet., with infus. rhei. In 45 days she was much better, and left London. The case was very severe, but the doses were evidently far too small.

Case 5.—T. Y——g, gonorrhœa of 1 month's standing.

R. Pulv. Rhei. ʒss.

Pot. Acet., Spir. Eth. N. aa ʒij.

Mist. Cam. ad ʒvj. ʒj. bis die.

Graduated Injections.

Cure in 7 days; slight relapse on the 11th day from drinking beer. Final cure on the 18th day.

Case 6.—Dec. 11, 1850—G. F. has had gonorrhœa some days.

R. Pulv. Rhei. ʒj., Pot. Acet. ʒiij.

Mist. Camph. ʒvss. ʒj. bis die.

Graduated Injections.

17th.—Going on well. He only takes his medicine irregularly. Continue.

27th.—Same report; he has now only taken ℥xij. of the medicine, the discharge is just gone. A day or two after this, there was a slight relapse, apparently from his catching cold. Some salines were prescribed with an injection which cured both.

Jan. 27, 1851.—He has caught a fresh infection, but in a somewhat milder form. The pulv. rhei. c. pot. liq., and pot. iod. was tried, with graduated injections, and effected a cure in 29 days.

Case 7.—J. C. began attendance Dec. 16, 1850, with gonorrhœa of 3 months' standing, for which he had been under treatment; did not know what medicines he had taken.

R. Pulv. Rhei. ℥ij., Pot. Acet. ℥iij.

Spir. Eth. N. ℥ij., Aq. ad. ℥vj. ℥j. bis die.

14th.—Continue.

21st.—The discharge has diminished to a gleet. The medicine to be left off, and tincture of steel substituted.

30th.—Left. A point of mucous discharge appearing each morning.

Case 8.— — K., Jan. 2, 1851, gonorrhœa of a week's standing.

R. Pot. Acet. ℥iv., Liq. Pot. ℥ij.

Pulv. Rhei. ℥j., Spir. Myrist. ℥ij.

Mist. Camph. ad ℥vj. ℥j. bis die.

Nit. of Silver Inj. every other day.

Graduated Injections.

By the time he had taken ℥xviiij. of the mixture, the discharge had diminished to a gleet, the medicines were left off, and only the zinc injection used.

Jan. 30th.—Has now been well some days.

Case 9.—W. G., Jan. 31, 1851, clap of some days' standing; his previous attacks have been very difficult to cure.

R. Pot. Acet. ℥iv., Liq. Pot. ℥iij.

P. Rhei. ℥j., Mist. Cam. ad ℥vj. ℥j. bis die.

Graduated Injections every second or third day.

Feb. 16th.—Complete cure.

Feb. 28th.—He has remained well.

Case 10.—J. M. applied Feb. 5, 1850, with a clap which he had had some time. He had been attempting to cure it by a

French prescription, of copaiba, alum, &c., which he had used in a previous case with success, after a nine months' trial of other remedies; this time, however, it failed. His bowels are very open, and he is delicate, and can only use very mild remedies.

R. Pot. Aect. ʒij., Liq. Pot. ʒij.

Syr. Aurant. ʒij., Aq. Cinnamon ʒvj. ʒj. bis die.

Mild graduated Injections.

10th.—He is very much better; the thick purulent discharge is becoming thin; there is not so much pain.

17th.—He has been well some days, but his appetite is bad; the urethra is moist, and he is troubled with wet dreams.

R. Quin. Disulph. gr. j. bis die.

R. Tereb. ʒij., Strych. gr. ss. in Pil. viij., ij. om. noet. Go on with the Injection.

Feb. 28th.—Well in all respects.

June 10th.—He has caught a fresh infection, and wishes to be cured at once. The discharge is just coming on.

R. Inj. Nit. Arg. gr. v. ad ʒj. immediately.

Inj. of Sulph. of Zinc to use at home.

R. Pulv. Rhei. ʒss., Pot. Liq. ʒiss.

Pot. Chlor. ʒiij., Aq. Men. ad ʒvj. ʒj. bis die.

The discharge ceased the next day.

Case 11.—W. L. has, Dec. 3, had gonorrhœa for five days; the running is thick and purulent with great smarting.

Inj. Arg. Nit. gr. x.

Inj. with warm water.

R. Pulv. Rhei. ʒj.

Pot. Aect. ʒiv., Spir. Eth. Nit. ʒiij.

Mist. Camph. ad ʒvj. ʒj. ter die.

Hot fomentations.

Dec. 4th.—Great improvement; bowels open; tongue clean; pain less. The injection gave him considerable pain, but afterwards great relief.

R. Inj. Arg. Nit. gr. x.

Inj. the urethra with cold water.

6th.—He is much better; the injection gave him less pain; the discharge is getting thin and streaky; bowels freely open. He has no objections to take copaiba. He has not yet injected.

Inj. Arg. Nit.

R. Mist. Cop. and Liq. Pot.

Injeet with Sulph. of Zine.

8th.—There is now only a little gleet, almost pure mucus, there was scarcely any this morning on rising. The redness, pain on erection, and tumid state of the mouth of the urethra are gone, the glans look shrivelled and dry.

R. Inj. again with Arg. Nit.

Cont. Cop. Mixt.

Inj. of Sulph. Zine.

Swelling of the testicle set in, he remained at home with it, instead of sending for advice, and nearly six weeks elapsed before it and the gleet were cured.

Case 12.—H. G., Feb. 12, 1851, has had gonorrhœa some days.

R. Pulv. Rhei. ʒss., Pot. Acet. ʒijj.

Pot. Liq. ʒiss., Aq. Menth. p. ad. ʒvj. ʒj. ter dic.

Graduated Injections.

22nd.—There is now no discharge. To take tinct. ferri. M. gr. x. of turp. every night. There was never any return of the discharge.

Case 13.—W. G. Applied July. 10, 1851, with slight running; his bowels and liver are out of order; his appetite and digestion are bad.

R. Pulv. Rhei. and bitter Infusion.

Five grains of Blue Pill every night.

Graduated Injections.

12th.—The discharge has nearly gone. Cont

The cure was completed in a day or two.

Case 14.—S. B. S. B. came under my care Sept. 12, 1851, suffering under severe indigestion and discharge; but no mention was made of the discharge for the first six or seven weeks, when the indigestion was cured.

Nov. 7, 1851.

R. Pot. Acet. c. Liq. Pot. et Pulv. Rhei. in mixt.

Inj. of Sulph. of Zinc.

She had not taken this medicine 48 hours before a marked change for the better took place; the discharge became thin and starchy, and her linen was only once or twice afterwards marked by spots.

On the 22nd, when seen, she had had no return of the dis-

charge for some days; ℥xii. of the mixture having sufficed to cure her.

Case 15.—D. M. applied Nov. 8, 1851, with spasmodic stricture. He had had gonorrhœa for a month, and had once before been under my care, when the case was remarkably obstinate. This time he had tried to cure himself with zinc injections, *vegetable pills*, salts, &c., and at the recommendation of a friend had taken seven bottles of sarsaparilla. There was now complete retention of urine, so that I was obliged for several days to draw it off, and on one or two occasions to apply caustic to the stricture, which was about two inches down.

On the 22nd, the treatment of the elap was begun with very mild graduated injections, and the mist. pot. acet. c. rheo. et liq. potass, the compound liq. potass having disagreed with his stomach.

In two days the discharge had grown thin and starchy, the redness of the glans abated, his bowels were freely opened, and the patient was delighted at the progress he had made; but unfortunately business prevented him from seeing me above once or twice a week, and I was afraid to trust him with injections; thus the discharge lingered about him. At the end of three weeks, as he was growing impatient, I applied a blister to the penis.

Jan. 5.—He is now under treatment for an injury to the hand; the discharge has long ceased. Only once or twice since the blister was put on has a point or two of mucus showed itself,

Cases treated with Potass. Chlor., &c.

Case 1.—A. W. applied June 18, 1851, with gonorrhœa; this is his third attack. Tongue clean and bowels open. The infection is recent, but the abortive treatment cannot be adopted, as he has to go to business.

R. Pulv. Rhei. ʒss., Sp. Ether. N. ʒij.
Pot. Chl. ʒiiss., Aq. Menth. ad ʒvj. ʒj. ter die.
Graduated Injections.

30th.—Great improvement. Continue.

July 2.—He can only take his mixture once a day, as it acts very freely on his bowels. Continue; raising the strength of the injection.

4th.—The discharge has quite disappeared ; gradual discontinuance of the treatment.

7th.—There has been no return of the discharge.

Case 2.—W. B. applied to-day, June 30, 1851, with gonorrhœa of some days' standing.

R. P. Rhei. ʒj., Pot. Chlor. ʒiv.

Sp. Eth. N. ʒij., Aq. Menth. v. ad ʒvi. ʒj. ter die.

Graduated Injections.

July 2.—Better ; there is a little deep-seated pain near the frænum. Frictions of mercury and camphor to the part. Continue injections. Continue mixture, and add ʒj. of pot. chlor. to the ʒvj.

5th.—The discharge is going ; ʒij. more of the pot. chl. added to the mixture ; ʒj. twice a day. Continue the injections, &c.

7th and 10th.—The same report. Continue.

13th.—There is now only a little gleet. His tongue is somewhat foul.

R. Pulv. Rhei. ʒj., Pot. Chlor. ʒiv.

Pot. Aet. ʒiiss., Sp. Ether. Nit. ʒiiss.

Aq. Menth. vir. ad ʒviij. ʒj. ter die.

15th.—Cure has been complete for a day or two. Continue the medicine and injection a little longer.

Case 3.—W. C. applied July 2, 1851, with a slight discharge ; asserts he has had no suspicious connexion lately.

R. Inj. Sulph. Zine.

Tinet. Ferri. Mur. ʒj. bis die.

Aug. 7.—The discharge has become purulent.

28th.—Worse ; he has done nothing for it.

R. Pulv. Rhei. ʒj., Ess. Camph. ʒj.

Liq. Potass. c. ad ʒvj. ʒj. o. m.

Inj. S. Z.

Inj. Arg. Nit. once a week.

By the 25th of September the discharge was entirely gone, two bottles of the mixture having sufficed.

Case 4.—Mr. M. applied July 4, 1851, with severe gonorrhœa ; fainted on the pipe of the syringe being introduced.

R. Mist. Rhei. c. Liq. Pot. c. ʒj. ter die.

Graduated Injections, beginning with Sulph. of Alum.

By the 9th he was able to bear an injection ; but deep severe pain near the frænum set in. The injection of nit. of silver pro-

duced a sloughy state of the urethra, and spasmodic stricture came on.

Iod. of Potass. to be added to the Mixture.

Frictions of Mercury and Morphia to the seat of pain.

The stricture touched with Arg. Nit.

11th.—Better; continue, and apply the caustic again.

13th.—The stricture gone, and the sloughy state has given way to gentle suppuration.

Omit the Iodide of Potass.

Mild graduated Injections.

By the 20th it had dwindled down to a slight moisture, and after the 26th he never saw any more of the discharge.

On the 10th of October he had another slight attack, which was removed by the 13th; and again on the 23rd of November a third, which lasted till the 29th. In both these the same treatment was pursued.

Case 5.—S., Esq., July 16, 1851; thick purulent running, severe pain on erection, urethra and glans bright red.

Graduated Injections every day.

R. Liq. Pot. c. in full doses with Pulv. Rhei.

The injections carried to the height of gr. x. to the ℥j. Cure on the 11th day.

Aug. 22nd.—A second attack.

R. Pulv. Rhei. ℥iss., Ess. Camph. ℥j.

Liq. Pot. c. ad ℥viij. ℥j. ter dei.

Graduated Injections.

In four days the symptoms were so far relieved that it was with great difficulty I could get him to persevere for a few days more; he would only consent to take one dose a day, but used the injection regularly. After the expiration of the first week the discharge disappeared.

Case 6.—Mr. C. B. applied Aug. 16, 1851, with severe gonorrhœa.

R. Pulv. Rhei. ℥iss., Sp. Ether. Nit. ℥ij.

Ess. Cam. ℥ij., Liq. Pot. c. ℥viiss. ℥j. ℥iis. horis.

Inj. Arg. Nit. gr.v. ad ℥j.

Inj. Sulph. Zine. to use at home.

Some months after I met him, and he told me the discharge was nearly gone by the second day, and totally disappeared on the

third. Once it came back for two days, and went away again by using the same treatment.

Case 7.—B. K. applied Sept. 1, 1851, with gonorrhœa of two days' standing; the abortive treatment cannot be applied.

R. Pulv. Rhei. ʒiss., Ess. Cam. ʒij.

Liq. Pot. c. ad ʒviij. ʒj. bis die.

6th.—He is much better; the discharge has diminished to a gleet. Continue. An injection of nit. of silver was also given him.

By the 9th the discharge had just disappeared, but he now left off using his medicines and injections with any regularity, and was not completely cured till the 30th.

Case 8.—Mr. M. applied Sept. 27, 1851, with gonorrhœa, which had just come on; considerable purulent discharge, with redness of the urethra, but no scalding.

R. Inj. Arg. Nit. gr. v. ad ʒj.

Hot bath and hot foment^s.

Pulv. Rhei. ʒij., Ess. Cam. ʒj.

Liq. Pot. c. ad ʒvj. ʒj. ter die.

Mild Injection of Sulph. Zinc.

28th.—There was but very little discharge, and it was thin and watery. All the uneasy symptoms were gone, and he thought he could see the discharge diminish every time he took the medicine and used the injection.

29th.—There was no discharge; he went into the country on business, drank some beer, and returned on the 30th with the discharge thick and purulent, the urethra tumid, and smarting when he made water.

Same treatment.

The next day there was again a complete change; the redness and puffiness of the urethra had subsided; there was less pain on making water, and the discharge was starchy. Inject again. No recurrence of disease.

Scalding.

1. REMEDIES RECOMMENDED ; OBJECTIONS TO THEM. 2. ANIMAL CHEMISTRY ; LIGHT IT THROWS ON THE SUBJECT. 3. PROBABLE EXPLANATION AND TREATMENT.

1. *Remedies recommended.*—Scalding may be looked upon as one of the most prominent and painful symptoms in this complaint ; it is constantly present in every severe case, and has even been considered by some authors as the distinguishing mark between a pure and a spurious gonorrhœa. Although this is undoubtedly not the fact, yet it may be considered a good criterion of the progress of the case ; for when the scalding is checked the running may generally soon be cured ; and when it continues, and the running is stopped, we do not know how soon the latter may make its appearance again. It is a symptom to which, when present, the patient almost always directs the surgeon's attention, and one which it is almost impossible to subdue, or even materially alleviate, without removing the diseased state of the passages. When severe, and particularly if the patient be labouring under gonorrhœa for the first time, it is productive of great suffering, the urine feeling like molten lead or boiling oil, and in its passage over the mucous membrane, inducing violent spasm in the muscular tissue by which it is embraced. For these reasons I have judged it, along with chordee, worthy of careful investigation, and, with a view of obtaining some specific directions as to the best mode of relieving it, have carefully searched all the works from which I was likely to derive the desired in-

formation, but, I regret to say, without any very satisfactory result. After a diligent perusal of every work or paper to which I could obtain access, I have not been able to combat this symptom in a way that I could wish. Numerous remedies, it is true, are indicated, but they are so unsupported by statistics and cases, and so vaguely noticed, that I was reduced to the necessity of examining *seriatim* what effect they have on the urine and scalding, the result of which was the conviction, that the most of them possess very little power indeed over either. In order, however, to ascertain their precise action, I reduced them to the four following classes:—

1. Anodynes; as laudanum, morphia, belladonna, &c.
2. Demulcents; as linseed-tea, barley-water, gum Arabic.
3. Diuretics; as nitrate of potass, sweet spirit of nitre, &c.
4. Alkaline remedies; as soda, potass, magnesia.

With a view of avoiding every source of fallacy, these four classes were tried successively on great numbers of patients. Blank forms were prepared for registering every symptom connected with the advance or decline of the scalding in each particular case, and the patients were examined for the most part every morning; at the same time that nothing was omitted that could expedite the progress of cure; so that the result of these observations may be viewed as the history of the action of these remedies, tried on this one symptom in its ordinary state, and on a tolerably extensive scale. Nor can I here omit publicly noticing how much I am indebted to the advice and assistance of Mr. Gay, of Finsbury, owing to whose kindness these experiments have been made and brought to light.

To return to the subject, then. 1. The effects of *anodynes* may be stated as null; they were tried in the form of

Objections to them.—(a) Laudanum. In some cases, where there was severe pain from other causes, it was pushed to the extent of 100 drops, without producing anything more than at times temporary relief; but even if of service, laudanum is a most objectionable remedy for this symptom, as its good effects do not in any way compensate for the constipation, headache, and languor it entails. Morphia in small doses was inefficient, and in large ones as objectionable as laudanum. Dover's powder produced no better result.

(b) Hyoscyamus alone, or combined with salines, appeared in

some cases to hasten the disappearance of scalding when injections were used, but alone its effects were quite negative, and externally it had no very marked action; in addition to which it made a nasty filthy mess, one of the things to which almost every gonorrhœa patient most seriously objects.

Belladonna I have not tried, nor have I much hope of any service from the use of it.

2. The *demulcents* exerted but very slight effect, though patients, in some instances, drank as much as a quart of thick linseed-tea in a day. These remedies have been recommended by very many writers; they have been supposed to sheath the fluid mechanically, and thus prevent the acidity of the urine from acting on the inflamed mucous membrane. This idea smacks a little too strongly of Dr. Cullen's opinion, that, "in tabes venenata, one cause of emaciation is produced by an absorption of oil from the cells of the cellular membrane into the blood, for the purpose of inviscating the acrimonious spiculae of the poisonous substance." It is not very probable that any portion of the mucilaginous matter, or gum, contained in them, ever enters the bladder, or even the kidneys, being all previously digested and assimilated.

M. Lagneau* says, "The liquids act in two ways: 1st, by calming the general inflammatory disposition which is sometimes very active; 2ndly, by thinning the urine, the acidity of which would, without this precaution, infallibly augment the irritation." Against the first part of this explanation it may be urged, that the inflammation, when very active, requires much more energetic means to counteract it than a few pints of ptisan; and against the second, that water will effect the same end more cheaply and conveniently.

3. *Diuretics* seemed to have some slight effect; and the solution of nitrate of potass (ʒss. in o.j. of barley-water daily) has appeared, in some cases, to alleviate the scalding; but it had evidently no power of materially benefiting it, so long as the diseased state of the passages remained unabated; still I am bound to add, that its effects were more satisfactory than those of any other remedy of this kind I have as yet seen, when properly aided. It was carried, in some instances to the extent of

* Exposé des Symptomes de la Maladie Vénérienne, Paris, 1815. Art. Traitement de la Blennorrhagie. Vol. i.

3iss a day, but seldom without producing some sickness and pain of the stomach; so that I am disposed to hold it to be inadmissible in larger quantities than 3ss daily.

4. *The alkaline remedies.*—Of these, the carbonates of soda, potass, magnesia, and the liquor potassæ, alone, and combined with other of the remedies recommended, were tried. I was induced to use these from generally finding the urine acid in the suppurating stage of gonorrhœa.* I was as unsuccessful as with the others. The following results were obtained from the observations made respecting their action:—

(a) The urine became alkaline in some cases, but the acidity returned even when the alkaline remedies were continued.

(b) This change was not accompanied by a relative change in the scalding, and hence it may be assumed that this is, at the utmost, but little dependent on the mere acidity or alkalinity of the urine.

(c) This change ensued, in some cases, where no antacid remedies were used.

(d) The scalding was relieved without the acidity of the urine being affected.

(e) Where the patients were seen but once a week, these remedies were used during various periods of from two or three weeks to as many months, without, in some cases, relieving the scalding till the diseased state of the passages was removed by injections, &c., when it at once went away.

(f) In some cases, in the latter part of the suppuration stage, they were of service, when combined with other means, as injections; but of less service in the early part of this stage, where the diuretics gave more relief.

(g) In the scalding, which appears occasionally in a very sudden manner in the last stage of gonorrhœa, they were often of positive harm, and rather served to prolong it.

(h) Again, notwithstanding that the urine was acid in this stage, the nitric acid was often apparently productive of relief. I say apparently, because this scalding will sometimes come and go in forty-eight hours, and, therefore, it is extremely difficult to

* The urine is generally said to be acid in a state of health; in Turner's Chemistry (8th Edition, London, 1847, p. 1302) I find it stated, that "it has an acid reaction, or is neutral, and even alkaline, in a state of health."

say what it is that carries it off, unless we had a remedy that did so in a much shorter space of time.

It is often very difficult to render the urine alkaline, though this may be accomplished by overwhelming doses of alkalis. Thus Wagner* found that \mathfrak{z} ij. of carb. of soda rendered the urine alkaline in three quarters of an hour; but, as this could only be a transient effect, the dose would require repetition. The alkaline reaction lasted in this case three days, while \mathfrak{z} ij. of acetate of potass. only rendered it alkaline for sixteen hours. According to my own observations, neither small nor large doses effected this change in many cases so easily and readily as might have been expected. The following extracts from my notes will, I hope, tend to substantiate all I have stated.

Thomas R—— took \mathfrak{z} j. of sulph. soda daily in barley-water. The first morning, the urine was acid, the scalding gone; but, on careful examination, it was found to have been nearly gone the day preceding, and it returned again.

Thomas J—— took, Aug. 1, \mathfrak{z} j. of sulph. of soda. On the 2nd (16 hours after), the urine was found alkaline, the scalding had gone; its disappearance was traced to the use of a warm bath. On the 3rd it had returned, and a warm bath again relieved it.

George P—— took \mathfrak{z} j. of carb. of soda and \mathfrak{z} j. of phosphate of soda in barley-water. He did not experience much benefit from them, the scalding having, in fact, gone from taking a warm bath. Eighteen hours after, the urine was acid, and, on standing, deposited a thick flour-like sediment; the scalding returned.

Charles H—— took \mathfrak{z} j. of the phosphate of soda in barley-water. Next morning the scalding was worse; the urine not examined.

George T—— took \mathfrak{z} j. of nitrate of potass. and \mathfrak{z} ss. of pulv. ipecac. c. in barley-water. Next day the urine was neutral, and the scalding not so severe; he repeated the dose, and the day after, the urine was strongly acid, and the scalding as severe as ever.

Henry B—— had had scalding for fourteen days. By taking \mathfrak{z} ivss. of nitrate of potass. and \mathfrak{z} iss. of pulv. antim., in eight days he was relieved, the disease having given way at the same time.

James B—— took, between the 30th of May and the 1st of

* Handbuch der Physiologie, b. ii., art. Harn.

July, ℥iss. of carb. of soda and ℥j. of pulv. jalap in small doses three times a-day; the scalding gradually diminished, the disease going at the same time. During the first fourteen days he had no diminution of the scalding.

Thomas R—— took ℥j. of nitrate of potass. and gr. xxiv. of pulv. antim. in six days. The scalding, which was going away, diminished under the use of this remedy.

Henry H—— has, July 2nd, acid urine and scalding. To take liquor potassæ ℥ss. ter die.

July 9th.—The urine acid; scalding still continues. To take the dilute nitric acid in decoct. of pareira brava.

July 16th.—The scalding gone, the urine still acid.

Samuel E——, July 9th, while taking liq. potass., was suddenly attacked by scalding; urine acid, sp. gr. 1028.

J. H. W., April 16th, has scalding from gonorrhœa. To take a scruple of nitrate of potass. and ℥ss. of gum Arabic thrice a-day, with Dover's powder every night, and injections thrice a-day.

20th.—The scalding much relieved, and in a few days disappeared.

Thomas R——, July 23rd, had had scalding from gonorrhœa two months. To take carb. of soda, gr. viii., and opium gr. $\frac{1}{4}$ twice a-day.

25th.—The bowels confined; scalding much the same. Carb. of soda gr. xii. and pulv. jalap gr. iii. twice a-day; injection three times a-day.

Aug. 1st.—Relieved; to go on.

8th.—The scalding has disappeared. Here the alkali was clearly of some use, as he had been using the same injection for two months, with mild aperients.

Two patients, with a slight clap of long standing and some scalding, were put, one on the soda and opium powder, the other on the soda and jalap. At the end of nine days they were examined again, having in that time taken each ℥ss. of the alkali. The patient who had taken opium and soda had lost the scalding, and with it the discharge. In the other, who had, however, taken some beer, it continued unabated.

Charles C—— had had scalding from gonorrhœa in a very severe form for some days. He was ordered a mild saline purgative, his bowels being confined, and to be injected three times a day. The scalding disappeared in a few days, and did not return.

G. W., Esq., had very severe scalding from gonorrhœa. He took, July 7th, ʒj. of carb. of soda in water, and was injected.

By the 8th, the scalding and other symptoms had diminished—the urine alkaline. He again took, 8th, P.M., ʒj. of soda, and was again injected.

On the 9th, the urine was acid, and the scalding had diminished.

Joseph M—— had scalding, for which he was ordered p. sod. e. jal. thrice a-day. Thirty-five days afterwards, when he had regularly continued the medicine, and had taken ʒivss. of soda, the scalding was still slightly present.

Charles L—— has been some days under the use of nitrate of potass. without material benefit; to try the carbonate of soda (May 10th), 10 grains, three times a day, and be injected.

13th.—The scalding is better, the urine neutral; go on.

15th.—The scalding diminishing, the urine neutral; go on.

16th.—The urine acid, the scalding giving way, the discharge diminished to a gleet; inject again, and go on.

17th.—He has got a cold; the scalding has returned as bad as ever.

It would be needless to pursue this point further. Enough, I trust, has been said to show, that none of these remedies act as a specific on the symptom in question. I will only stop to add, that benzoic acid was tried, with a view of converting the uric into the hippuric acid, and that it, like the rest, had no material effect.

It was while examining these points that I found, that those patients who took warm baths every day seemed to suffer much less from the scalding than the others; and that this seemed to follow from the warm baths alone, it being sufficient, with many, to carry off, not only the scalding, but the smarting from the injection. Struck with this fact, I carefully followed it up, and, as the means of obtaining warm baths in London are now within the reach of every person, I was able to obtain a tolerably long list of results, most of which verified the first observation. Wishing to go still further, I carefully examined the effects of abstinence, water-drinking, &c., on the urine. The observations on which these results were founded are much too extensive to admit of insertion here, and therefore I trust my readers will excuse my only giving the results. They were—

1. That the action of the warm bath was more potent than

that of any other remedy, therapeutic or hygienic; but that it only lasted an indefinite time, varying from an hour to half a day.

2. That it was powerfully seconded by abstinence, not only from meat, but also from drinks of all descriptions except water, and that great bulk was as objectionable as a stimulating quality of food.

2. *Animal Chemistry.*—Let us now see what light organic chemistry can throw on the subject. And here, as a preparatory remark, let me observe, that I will not dilate on such aphorisms as that “we can, by a judicious choice of food, bring the urine into any state that may be wished for;” or that “the urine always becomes alkaline when the food contains salts of soda, or potass, with organic acids, &c. ;” because, even if we knew how much of the wished-for ingredient is contained in a pound of beef or a cabbage, the knowledge would be, in many cases, inapplicable. It is not every patient who can so regulate his diet, though we can give him, in the way of medicine, anything we like; and hence the remedy must be something admitting of general application.

Light it throws on the subject.—The principal information we could hope to derive from organic chemistry would be, to know if scalding depends upon the preponderance or presence of any one ingredient in the urine; but this I have not been lucky enough to meet with. It is true I may have overlooked the right sources; for so vast are the contributions to this branch of chemistry, which have appeared within the last ten or fifteen years, that a mere practitioner finds himself, on approaching such a complicated matter, like a traveller wandering on some trackless and interminable waste, where the obstacles to his progress thicken, and the goal appears more distant with every step he takes. Alfred Becquerel, in his “*Semeiotique des Urines*,” * says, “The existence of a simple blennorrhagia, whether acute or chronic, only produces in the urine the presence of a small quantity of muco-pus, which is thrown down, sometimes in the form of flakes, sometimes in that of whitish filaments, rarely in large enough quantity to render the urine alkaline. When the running is very great, it sometimes happens that the urine passed in the morning, on rising, contains more muco-pus than that passed at

* “*Semeiotique des Urines*,” par Alfred Becquerel. Paris, 1841. P. 475.

other periods of the day, that there is a little albumen in it, and that it is less acid than usual." And in the statistics he has given of the quantity of urea, uric acid, &c., which he has detected in the urine of patients labouring under certain diseases, one of the cases quoted is that of a patient with gastritis and blennorrhagia. On this, the only case in his work bearing at all upon the subject in hand, much dependence cannot be placed, as regards gonorrhœa merely. We find in it that the quantity of urea was not increased, and that the quantity of lithic acid was relatively less, but really normal, the quantity of water being augmented.

It now remains to be seen if that part of organic chemistry which relates to general pathology will yield a clue to this knotty maze. The urine being assumed to consist of water, extractive matter, salts, acids, and urea, I propose to examine them in succession, and see which can, with the greatest probability, be assumed to be the cause of scalding. The first ingredient may be set aside, as we know that it will of itself produce no smarting at a temperature of 80 or 90 degrees; the extractive matter cannot be admitted as a cause, seeing that it is generally held to be refuse tissue, or the colouring matter of the blood or urine; chemists being agreed upon this, though at variance as to which of the three it is. The salts are so small in quantity, many of them so inert, and some so frequently taken in large quantities without producing scalding, that one might be tempted to refer scalding to the acids alone, were it not, as I have said, that scalding goes on when the urine becomes alkaline.

The acids consist, generally, of lithic and lactic acids; the lithic acid is said occasionally to produce some scalding in other diseases, when large quantities of it are thrown off; and it is very probable that it, or its salts, (when alkalies are given,) is the cause of scalding in gonorrhœa, yet this is often allayed by nitric acid, or at least when nitric acid is given; and, according to Prout,* the mineral acids tend to produce lithates and lithic acid. The quantity of it in solution, however, can hardly be materially increased, for it is only soluble in 10,000 parts of water.

If it be the source of scalding, we ought to be able, in some measure, to control it. We cannot prevent it appearing, to a certain extent, by any modification of the food; in fact, it will

* Prout, on Urinary Diseases. London, 1840.

appear where no food whatever has been taken. Lassaigu found it in the urine of a maniac who had fasted fourteen days. Rudolph Wagner observed that it was found in larger quantity when he fasted than when using vegetable diet, or food freed from carbonaceous matter.

We can increase it, however; thus, under rich living, Wagner found it increase, but not to any great extent. Barral says that it increases when salt is used in the food. Becquerel gives, as causes of the augmentation of the matters held in solution in the urine, "rich living, and the introduction into the economy of an abnormal quantity of water. I shall demonstrate, further on," he says, "that, in this case, not only do the kidneys unload themselves of this unwonted quantity of liquid, but that this heightened action produces an increase in the sum total of the matters held in solution." It is probably from furnishing more abundantly a necessary medium of solution, and thus assisting assimilation, that water drunk in this way aids the production of lithic acid and other substances. He says, also, that "the production of lithic acid is increased by exciting drinks and fever." Drinks of this kind increase the scalding, probably by feeding the inflammation, while fever checks or suspends a gonorrhœa. Great general disturbance of the system not only increases it absolutely, but also relatively, by diminishing the quantity of water.

Can we diminish it in any degree? The facts above given tend to show that, by an apposite method we can; but not by drinking plentifully of bland liquids, as is so often recommended. Food freed from carbonaceous matters diminishes it most of anything, while it increases the quantity of the lactates,* and a pure vegetable diet diminishes it and lactic acid more than abstinence. The use of filtered water seems to diminish it absolutely, and the introduction, by the warm bath, of a quantity of water into the system, to diminish it relatively, like copious liquid evacuations, by increasing the quantity of water in the bladder and kidneys. These last two causes, however, act very differently.

But the difficulty does not end here. It seems even doubtful if the lithic acid exists pure in the urine. Becquerel says it does not, and that it does not exist in this fluid in a crystallizable state, being prevented from crystallizing by the animal matter with which it is in combination or connexion; if it become crystallized it is insoluble,

* Rudolph Wagner's Physiologic. Harn.

even in hot water, and consequently in the urine, and then is with difficulty acted on by such strong solvents as hydrochloric acid, or dilute nitric acid; that it may very easily become lithate of ammonia we know, for urea, by absorbing two elements of water, becomes carbonate of ammonia, and that this change is not uncommon, if Becquerel's statement be correct, that whenever the urine becomes alkaline it is by change in the composition of the urea. Lithate of ammonia is likewise much more soluble in the urine than lithic acid, and it may be formed, Prout tells us, when no food has been taken into the stomach; so that all the measures necessary for its appearance are always at hand in the system. Finally, it must not be forgotten, that however easily lithic acid may, by analysis, be detected in a free state in the urine, it may, by the very process of analysis, be separated from the combinations in which it exists in the body.

Is the source of acidity, then, to be sought for in the lactic acid? At the very first step towards answering the question we are met by doubts as to its being found at all in the urine, and as to its quantity if it be there. Berzelius has stated the proportion of this acid, with the lactate of ammonia and animal matter adhering to them, to be 17·14 in the thousand; this, however, Becquerel and others consider too high. In "Turner's Chemistry," p. 1302,* the following passage occurs in reference to the Table given by Berzelius:—"What in this analysis is called lactic acid and lactates is not so, but consists chiefly of organic matter, the precise nature of which has not yet been ascertained, but which is now known to contain kreatine and kreatinine;" and again, same page, "If lactic acid ever occurs in urine, it is probably an abnormal product, for Liebig has proved, by experiments on a very large scale, that normal urine, whether fresh or putrid, contains no lactic acid." Wagner is evidently opposed to this; nor is he alone. Prout says, p. 81:—"In ague and rheumatism, during the sweating stages of the paroxysms, immense quantities of acid (chiefly lactic acid) are thrown out by the skin, and sometimes by the kidneys." Becquerel says:—"The organic matters (principally lactic acid) are increased by febrile diseases," &c.; and I might multiply instances indefinitely to show that this acid is believed to be present in the urine. If it be so, food freed from carbonaceous matter would seem to offer the best means of

* Turner's Chemistry, by Liebig and Gregory. London, 1847.

diminishing it in the urine; but the use of this increases the quantity of the lactates, as the following table from Wagner will show:—

	During abstinence.	When subjected to rich living.	On pure vegetable diet.	On food freed from carbonaceous matter.	
Lithic acid .	1.183	1.478	1.021	7.35	} Water 1.000
Lactic acid .	2.625	2.167	2.531	5.726 Lactates.	

If, then, lactic acid do not exist, and lithic acid be not found pure in the urine, how comes it that the urine is acid? Liebig says that urine always contains hippuric acid in quantity equal to that of uric acid, and that both these acids are more soluble in a solution of phosphate of soda than in water, that this solution has an acid reaction, and to this he attributes the acidity of the urine. Moreover, Prout has detected benzoic acid in the urine, the source of which, it is thought, could only be hippuric acid.

We have now only the urea to notice. The effects of various applications to ulcerated surfaces would lead us to conclude that acids or alkalis are more likely to produce painful effects than urea, a substance nearly identical with carbonate of ammonia, and rarely, if ever, existing in excess in the urine. The real way would be, for some chemist to examine the urine of gonorrhœa patients, and to inject into the urethra solutions of these substances, if patients complacent enough to allow such experiments to be made on them could be found.

On the whole, then, I think we may conclude, that though organic chemistry gives us vast results, yet it offers little towards the solution of the question in hand. It has not yet been so perfected that we can, upon giving a certain quantity of food and drink, say what will be poured out into the bladder in a given space of time, nor how we can, by simple and attainable means, at once prevent the appearance of a noxious ingredient in the urine. But such a state of knowledge is not unattainable; the contributions of individuals to so great a work, small as they are of themselves, are yet the necessary material for some master-

spirit to work on. Each individual effects, in his own sphere, a necessary revolution in thought and science—a minute-stroke on the ever-beating pendulum of time—which may at a distant date be welded into its proper form by a future Newton or Humboldt; and *then* we may cast the horoscope of a disease by an examination of the urine.

3. *Probable explanation and treatment.*—What, then, can we glean from these disjointed observations? Empirical practice must guide us, I fear, till chemistry has made further progress, and on this assumption I shall conclude by stating what deductions I think may be drawn from the materials brought together.

1. I suppose that in gonorrhœa there is augmented action and more rapid development of epithelium; that this augmented action or inflammation soon casts off the flattened scales which form the outer surface of the epithelial covering in a state of health, and exposes the yet tender and unflattened cells, gifted, perhaps, with a much greater power of endosmosis than the firm flattened cells, to the action of the urine and injections. I consider it as very probable, that this is the explanation of the canal being so swollen, and also that when a block of such cells is suddenly detached, a sore place ensues in the membrane, or the unsupported vessels give way, and bleeding follows.

2. I think that the scalding is owing to the action of the acids of the urine or their salts on this abnormally tender membrane.

3. That the best remedy for this is the free use of the hot bath, and hot bathing to the penis and bladder, moderate abstinence and the use of no drink but filtered water; while at the same time we must steadily act on the disease, and endeavour, more than anything else, to subdue it.

4. If we wish to act on the urine, it must not be forgotten that weak saline solutions will pass off by the kidneys, but that strong ones are apt to be determined to the bowels.

5. That with regard to the disease itself, a remedy has not yet been found which will act specifically on it, and that the action of the remedies in use is strictly limited—

(a) To preventing the action of fresh causes, as rest, abstinence, &c.

(b) To acting on the surface, as injections and copaiba.

(c) To relieving to a limited extent by derivation, as is the effect of aperients.

And that we have not, among the medicines hitherto recommended, a remedy which will directly and positively antagonise the actions set up in gonorrhœa.

Chordee.

1. EXPLANATIONS OF GIVEN BY AUTHORS ; OBJECTIONS TO THESE.
2. TREATMENT USUALLY ADOPTED. 3. PROPOSED PLAN OF TREATMENT. CASES.

1. *Explanations of.*—Chordee and painful erections are such prominent and painful symptoms in gonorrhœa, that it is unnecessary to dilate on the importance of attending to, and, if practicable, alleviating them as quickly as possible. Long continued painful tension of the penis, when the urethra is suffering under a specific inflammation, seems not a little calculated to lay the foundation for spasmodic or even organic stricture ; and, if incapable of producing such results, it seems to bring about a state of the urethra peculiarly ill disposed to the healing of gonorrhœa. Again, it has a most injurious effect on the health and spirits of the patient suffering under it ; an irritable or delicate man, obliged to rise four or five times in the night, to walk about, or stand with his feet on some cold surface, or even plunge the penis into cold water, cannot but suffer in the long run. The urethra has not unfrequently been injured by the remedies which patients, tormented beyond endurance, have employed ; and lastly, the cases of stricture reveal for the most part the history of a neglected or inveterate clap,—a fact of sufficient importance to make every discovery valuable that can tend to hasten the cure of gonorrhœa, and alleviate its painful complications.

Chordee appears to be the first link in that chain of sympathetic irritations set up by gonorrhœa, which, from their resem-

blance to inflammatory phenomena, have been treated antiphlogistically by many practitioners. I allude to swollen testicle, irritable bladder, &c. Probably the affections of the glands, denominated sympathetic bubo, and gonorrhœal mumps, and rheumatism, the two former of which bear a strong resemblance to orchitis, are closely allied but more distant phases of this chain of actions. Violent pain, spasm, reluctance to form pus, are characteristic marks of these affections; the analogues perhaps of the cough and soreness which attend the acme and decay of some affections of the mucous membranes, as cold and influenza.

It has been divided by common consent into inflammatory and spasmodic; but while the origin of the former has been silently conceded to muscular contraction, or orgasm of the erectile tissue, that of the latter has been freely contested. Mr. Hunter says,* “when the inflammation is not confined merely to the surface of the urethra and its glands, but goes deeper, and attacks the reticular membrane, it produces in it extravasation of coagulable lymph, as in the adhesive inflammation, which, uniting the cells together, destroys the power of distension of the corpus spongiosum urethræ, and makes it unequal in this respect to the corpus cavernosa penis, and therefore a curve on that side takes place in the time of erection.”

Mr. Nisbett † says also, that it “depends on the extravasation of coagulable lymph into the cells of the corpus spongiosum urethræ.” Zoll‡ gives the same account.

Sir C. Bell § says, “the chordee is caused by erection when the membrane of the urethra is already inflamed, and has consequently lost its elasticity; being powerfully stretched, it cracks, and you have hæmorrhage. It is obvious that, if you do not subdue this, you lay the foundation of strictures.”

Mr. Wallace says, after alluding to the explanation of this symptom by effusion of coagulable lymph into the cells of the corpus spongiosum, “this explanation, however, is seldom perhaps, if ever, correct; for, as soon as the inflammation and irritability of the urethra, and the disposition to these painful erec-

* “Hunter on the Venereal.” 1810. P. 52.

† “First Lines of the Theory and Practice in the Venereal Diseases.” 1787.

‡ *Prælectiones*, 104.

§ “*Institutes of Surgery*.” 1838. Vol. i. p. 292.

tions have subsided, the penis ceases to be preternaturally curved during its priapism; and this could scarcely happen if its spongy cells had been agglutinated by lymph; for such agglutination would most probably be persistent, at least for some time after inflammation, &c., had subsided."

"How, then, is the unnatural curve of the penis, which attends chordee, to be explained? I answer, that it is owing to the spongy body losing from inflammation its extensibility, and that the corpora cavernosa are not affected in this way; the proof being, that the curve takes place in the direction in which the want of extensibility of the corpus spongiosum would act on the corpora cavernosa." But the reader will ask, how can it lose this extensibility from inflammation, unless the cells be glued together by coagulable lymph?

Mr. Childs, again, attributes it to "effusion of coagulable lymph into the reticular texture of the corpus spongiosum." In short, though the theatre of action is so limited, opinions are as diversified on the origin, as on the treatment of this symptom.

Objections to these.—But, however ingenious and philosophical these explanations may be, and however much they may bear upon them the impress of truth, it is still worth while to examine on what proofs they rest. I would therefore ask—

1st. Is there on record a single case in which it is shown, on *post-mortem* examination, that the corpus spongiosum was in the state supposed; that is, containing effused lymph?

2nd. Is there one where it is shown that this took place without effusion into the upper surface of the urethra, or into the corpora cavernosa penis?

3rd. That if Sir C. Bell's explanation be admitted, how comes it that we can bind the glans penis downwards, and thus relieve the chordee? If the mucous membrane had lost its elasticity, so that it could not be bent upwards without pain, how could it be bent downwards, not merely without pain, but with positive relief to suffering?

It must not be forgotten that the cause of the erection of the penis itself is still a disputed point. We may admit that the erectile tissue becomes filled with blood by the "turgor vitalis;" but the elevation of the penis seems to demand the interposition of muscular action.

But, admitting that any one of these reasons was true ; admitting that the under surface of the urethra has lost its elasticity, that lymph is effused into the corpus spongiosum, and not into the corpora cavernosa, so chaining down the urethra, this would only prevent the extension of the penis in length. In ordinary erection of the penis, that part of the urethra which is the seat of chordee is carried upwards nearly unaltered in direction ; the greatest curvature taking place beyond the specific seat of gonorrhœa. Mere effusion of lymph could not *bend* the urethra.

Moreover, I have never been able by manipulation to detect the effusion of lymph in the living subject. The only alteration I have ever remarked, was a certain hardness in the middle portion of the urethra, but this was towards the close of the complaint, and more likely to be a consequence than a cause of chordee.

On the other hand, there seems to be some facts which might suggest its being due to muscular contraction ; the first is, that the erection of the penis is designed for the emission of the semen, and that some analogous acts in the animal economy are performed by the mixed agency of animal and organic muscles. The second, that painful erections, which are but one stage removed from spasmodic chordee, can scarcely be caused by anything but the cause of healthy erection.

The third, that even the supporters of inflammatory chordee admit that there is a spasmodic chordee.

The fourth, that the form which the penis assumes in chordee is more like that which the urethra would take on if acted upon by longitudinal muscular fibres seated on the under surface of the urethra, from that resulting from a solid deposit of lymph, which could scarcely be always effused so regularly as to give the penis the same form in every case.

The fifth, that the observations made by Mr. Bauer and Sir Everard Home, the investigations of Mr. Kölliker and others, and the recent discovery by Mr. Hancock, of the prolongation along the urethra of the muscular coat of the bladder, tend to show that the urethra may be acted on by spasm. The specific seat of gonorrhœa corresponds to the place in which this spasm would ensue.

Dissection of the penis reveals in connexion with this part a cellular layer, uniting the corpus spongiosum to the corpora

cavernosa above, and the skin below. The corpus spongiosum, which appeared to me to be thicker along the under than on the upper surface of the urethra, is invested by its own fibrous sheath and invests the urethra. It contains fibres which, when examined under the microscope, bear a strong resemblance to muscular fibre, and differ widely from those of the fibrous sheath in the corpus cavernosum; these fibres seem to get fewer and less characteristically marked as the corpus spongiosum expands to form the glans penis. I am not sufficiently versed in the use of the microscope to say with certainty if these fibres are muscular or not. My friend, Mr. Lane, however, seemed to consider them as bearing a strong resemblance to muscular fibre, but the penis on which the examination was conducted was not sufficiently fresh to enable us to decide positively.

The sixth reason is, that the irritability of the bladder, swollen testicle, abscess of the perinæum, sympathetic bubo, seem to be, at all events in the early stages, much more like spasm than real inflammation. Irritability of the bladder is clearly spasm; swollen testicle rarely goes on to the formation of pus; and if it be at times accompanied or followed by some of the phenomena of pure inflammation, it is possible that these are secondary, and induced by the secretion of the gland, locked up by spasm, acting as a foreign body. Abscess of the perinæum seems explicable in the same way, and is perhaps connected with the prostate gland; sympathetic bubo seems closely akin to this.* Antiphlogistic remedies in their early stages (that of spasm before the locked up matter has caused real inflammation) are not so useful as anodynes, warm bathing, and antispasmodics.

Lastly, closely analogous spasms take place in some disordered conditions of the mucous membranes of other parts of the frame.

2. *Treatment usually adopted.*—But for all practical purposes, the subject we have to deal with resolves itself into two facts; the one that there is a spasm, the other that the disordered condition of the mucous membrane causes this, primarily or secondarily, to be attended with pain. Let us, then, briefly examine the treatment which has generally been adopted with a view of giving relief. In a paper like this, I am prevented, by my limited space,

* I have once or twice punctured a bubo in this stage, when it seemed likely to burst, and have let out only something closely resembling lymph.

from giving in detail everything that has been written on this subject, or even enumerating the various plans of relief. I shall therefore confine myself to a few of those best known and most employed, and then proceed to lay down my own treatment, and illustrate it by cases.

M. Lagneau * says, " for the inflamed chordee, bleeding from the arm, hot bathing to the perinæum, lavements, eighteen or twenty leeches to the canal of the urethra, two or three times repeated, and, when the pain is severe, gr. i. of the watery extract of opium, and gr. ii. of camphor," which he recommends giving in the evening. He winds up this energetic treatment by a solemn warning not to plunge the penis into cold water, as it may be, and has been, followed by a metastasis of the complaint of the bladder.

M. Ricord† recommends gr. iiss. of camphor, and gr. ss. of opium, in a pill, of which two or three may be taken every night.

Richter‡ recommends that the patient sleep on a hair mattress, and very cool, or else on a canopy, and do not turn on his back. Eisenmann§ that the parts should be exposed to the influence of narcotic vapours; or that infusion of camomile or cherry-laurel water be injected or dropped into the urethra. He found sedatives of no avail. He recommends the patient to make water more frequently than necessary, because a distended bladder irritates the vesiculæ seminales and the neighbouring parts. He objects, also, to dipping the penis in cold water, and then recommends soothing injections, or poultices; opium being less useful. Peyrilhe recommended ammonia and injections of soap lye. Iodine, the empyreumatic oil of tartar, and blue ointment, have also been praised.

Mr. Hunter says,|| " he has known twenty drops of the tinctura thebaica take it (painful erection) away for a whole night, and that the cicuta has likewise some powers in this way." For the chordee he recommends opium joined with camphor, praises local bleeding with the free use of hot vapour to the parts; poultices with camphor; while the effused lymph which remains may be

* Art. " Traitement de la Blennorrhagie chez l'Homme," p. 65, vol. i.

† " Ricord, Traité Pratique des Maladies Vénériennes."

‡ " Richter's Chirurgische Bibliothek," b. 4, J. 491, &c.

§ " Der Tripper in allen seinen Formen." Erlangen. 1839.

|| " On the Venereal." 1810. P. 95.

removed by mercurial ointment in friction. He has seen the cure of service.

Mr. Wallace recommends calomel and hippo, with opium and camphor.

Such are the general outlines of the practice pursued by surgeons, as we find it recorded in books. These plans bear a pretty strong resemblance to each other, and are nearly all calculated to lead to one point—the allaying of pain by the use of sedatives. The idea of attempting to remove it by the pure antispasmodics does not seem to have been worked out or even entertained, although everything seems to show that it is more amenable to them than to opium. I will add but one more remedy, as remarkable for its originality as any I know, and which was, I believe, first recommended in writing by Dr. Colles. It is, that when the patient finds the chordee coming on, *he do turn over and balance himself on his knees and elbows till the chordee goes off*. The reader can easily imagine what effect such a remedy would produce. Let him figure to himself an exasperated patient struggling in the middle of the night to get ease in this way! Verily this is surgery!

I now approach that part of the matter which has most of all occupied my attention—the substitution of some simple and always applicable remedy for these different methods of cure. I will not stop to point out the inutility or inapplicability of antiphlogistic treatment to this symptom, as any one versed in the disease must have observed cases where the chordee came on though the patient had been treated most heroically. Sedatives I utterly object to, as I have never used them in sufficient quantity to have any material effect on the chordee without finding the patient much worse afterwards. They generally disordered the stomach, produced headache and languor, very often with constipation of the bowels. The scalding and discharge were rendered worse and more obstinate, and to crown all, the chordee was merely abated for an instant, and returned the moment they were left off; nay, even when they were again administered without increasing the dose. Nor have I ever been able to understand why they should be given, as the pain appears to depend on a spasm, and when this is removed the pain ceases; whereas the spasm does not necessarily subside when the pain is relieved.

3. *Proposed plan of treatment.*—I have tried the most power-

ful antispasmodics, as ether, galbanum, assafoetida, and chloroform, and can only say of them that I have found nothing equal to camphor in the fluid form. In powder, camphor is disagreeable to take, and did not appear to act so readily, I suppose from not being so equally diffused and finely divided as in solution. In fact in spasm, a liquid remedy, as admitting of a more rapid action, is always the thing to be sought for. The spirit of camphor, taken in the dose of ʒj., in a small quantity of water, is equally energetic and rapid. The objection that it immediately becomes insoluble by contact with water, is sufficiently obviated by the fact, that its operation is most certain and rapid, and that essence of camphor, in which the camphor is so dissolved that it does not separate on the admixture of water, possesses, so far as I have been able to judge, no advantage over the other.

As in many other cases, the chain of morbid actions must at once be broken, and this is done much more effectually by two or three full doses, repeated at short intervals, without the least remission, till the chordee is completely stopped, than by small quantities, however long continued and regularly taken. I therefore invariably adopt the following plan :—

A teaspoonful is to be taken at night in water before going to bed, and *every time the patient wakes with the chordee, let him at once rise and repeat the dose.* In the milder cases, one dose for a night or two is generally enough. In the more severe ones, the symptom is generally removed at the end of the second night, becoming, in the meantime, milder and less frequent in each dose. So long as the clap remains bad, I frequently recommend the patient to take a teaspoonful at night, before going to bed, which suspends the chordee till the cure is completed. This plan of treatment also answers well in the bearing down pains to which women are sometimes subject in clap; but as here, contrary to what it is in men, these pains are generally worst in the day-time, it is best to use the essence of camphor largely in the medicine they may happen to be taking.

It must, however, be taken in full doses. A violent sudden pain, like that of chordee, requires an equally powerful remedy, and there is no use in trifling with it. A less quantity than a teaspoonful will not always suffice to abate the pain at once, though it may materially alleviate it; just as a moderate dose of chloroform will lull the acute pain of an operation without ren-

dering the patient insensible to what is going on, while a smaller quantity, in one full dose, produces complete torpor. Now, as a teaspoonful or two may be safely taken, it is best to insure success at once. In one or two cases, it has produced some sickness, and, strangely enough, this has been more the case with small doses than with large ones; this was probably caused by something having been previously taken that had in some measure disordered the stomach. At any rate, the instances have been too few to make the affair of any moment. I only allude to it here, that no one might by its appearance be discouraged from giving so valuable a remedy as camphor really is.

The patient should be directed to keep the camphor in a tightly-corked bottle, and in a cool place, and to have it by his bed-side ready to take. It is best taken in water, as, if dropped on sugar, it produces a strong sensation of heat in the mouth, occasionally preventing the patient from getting to sleep again.

These cases given here are merely extracts from my notes. I have purposely restricted myself to the treatment of chordee, the limits of my paper preventing me from going into detail. The reader will therefore conclude that when nothing further is added, chordee did not recur, and that the gonorrhœa was treated at the same time by medicines, injections, &c. It will be observed, that in the earliest cases, the remedy was administered in doses of twenty drops. Having never seen the camphor given in this form, I was obliged to experiment with those inefficient but safe quantities, till success made me bolder.

Case 1.—R. S., has now, July 10th, 1850, chordee three or four times every night. It is painful while it lasts, but disappears when he gets up.

Sp. camph. \mathfrak{mxx} . at night.

July 13th.—He took the \mathfrak{mxx} . on going to bed. It took away the chordee completely, and the same results ensued the next night; but this morning he found a little of it.

To take the camphor in the morning also.

22nd.—The chordee absent since the last dose. The gonorrhœa improving.

29th, 30th, and 31st.—The same report.

August 3rd and 6th.—The same report. When last seen, the gonorrhœa also was cured, and he had suffered from no return of the chordee.

Case 2.—John S., July 8th, 1850. Has chordee very bad; the pain is extremely severe, and attacks him in the day time as well as at night.

To take ℥xx. of sp. of camph. every time it comes on.

9th.—The chordee was instantly relieved by the camphor.

10th.—The camphor again took away the chordee last night.

11th.—The chordee came on yesterday in the day time, but the camphor chased it away, so that he has had none since.

15th.—He has very little chordee; it did not come on at all last night, but it troubles him in the day time. He only takes ℥xx. of the sp. camph. in the twenty-four hours.

16th.—The chordee and erections are gone under the sp. camph. He had no more till July 29th, when he was a little troubled with it on rising. He had latterly only taken the camphor three times a week; and it was therefore directed to be used more frequently. In all the subsequent reports of his case, both chordee and erections are marked absent.

Case 3.—A. S. has now, July 8th, 1850, had clap upwards of three weeks. The last night or two the chordee has been very severe.

To take ʒss. of sp. camph. on sugar.

9th.—The camphor made his mouth very hot; but the chordee was absent for the first time. To go on.

10th.—The chordee was again absent. He took last night thirty drops on sugar, which produced great heat in his mouth. The strong taste went away in about a quarter of an hour, and he fell asleep.

11th.—The spirit of camphor has again driven away the chordee. He took ℥xx., which again made his mouth extremely hot.

12th.—No chordee. He took ℥xxx. last night.

13th.—No chordee. He now takes ℥xxx. regularly without any bad result.

15th.—The chordee gone at night. It comes on somewhat in the morning before he gets up. The gonorrhœa disappearing.

To take the camphor also in the morning.

16th.—He took no drops, but had also no chordee.

18th.—He took the camphor again last night, as the chordee again came on the night before.

23rd.—No chordee; but he is troubled with erections in the morning, which are, however, only slightly painful.

26th.—The same report exactly. He is just well.

Case 4.—C. G., July 9th, 1850. Has had gonorrhœa four or five days. Last night the erections were so exceedingly painful that he had to rise twice.

To take the sp. camph.

11th.—It has made him rather sick, though he restricted himself to twenty drops, and had taken nothing to eat since tea.

13th.—He took the camphor immediately on going to bed. He had some slight chordee.

15th.—The chordee has been allayed by twenty drops, taken a quarter of an hour before going to bed; but it still comes in a subdued form two or three times in the course of the night. The under surface of the urethra is then painful. It passes away, however, so soon as he sits up for a few minutes.

To continue.

He recovered without being any more troubled with it.

Case 5.—D. M., July 9th, 1850. Has had gonorrhœa ten days; the chordee came on this morning. To take ℥xx. of the sp. camph.

10th.—This dose somewhat checked the chordee, which only came on twice last night; previously, he had it nearly all the night through.

To take thirty drops.

12th.—The chordee is better. To take forty drops.

15th.—He has had chordee only once since last date. To take the camphor whenever it comes on.

16th.—He has had no chordee.

There was never any more discharge or chordee. I saw him July 30th for the last time; there had then been no symptoms of gonorrhœa for a fortnight. Erections, which were somewhat painful, were confined to the day time.

Case 6.—J. M., July 10th, 1850. Has had gonorrhœa seven days. The chordee was so bad last night that he had to rise twice.

To take ℥xx. of the sp. camph.

12th.—The chordee was not in any way allayed by the sp. camph. To try ℥xxx. twice in succession.

16th.—The chordee went under the first dose; it only recurred once, and was not so painful as at first. He took a second dose and subdued it again.

18th.—The chordee only slight; it came on once last night, and once the night before.

20th.—The echordee gone; he had one slightly painful erection last night. He only took mxxx. of the sp. camph. on going to bed.

23rd.—He has had no echordee or erections for two nights; the gonorrhœa going away. To continue the camphor.

25th.—He is worse in every respect, having had a complete relapse; the erections were painful this morning. To take the camphor. Lost sight of.

Case 7.—T. R., July 31st, 1850. Has had gonorrhœa some days; echordee has come on. To take sp. camph. 20 drops every night.

August 1st.—The echordee gone; had one painful erection this morning. To continue.

2nd.—Chordee gone; one painful erection at 4 P.M. To take 30 drops.

3rd.—No echordee: one erection at 12 P.M. He had taken 30 drops of camphor at half-past ten. To take the camphor whenever the erections come on.

6th.—No echordee. He generally has one erection about 5 A.M., but a dose of the camphor soon allays it.

8th.—He took some beer yesterday, and is in all respects worse; had two painful erections this morning. To go on with the camphor.

9th.—No chordee; had one painful erection at 4 A.M.

10th.—No echordee or erections.

13th.—No chordee; the erections are still somewhat painful, but do not occur above once or twice. He takes his drops only once at night. From this time till the 27th he had generally one rather painful erection every night; he never increased the dose of the camphor, nor did his gonorrhœa diminish much. From the 27th, till Sept. 2nd, he had no erections at all; but on this latter date he suffered a complete relapse of the disease, accompanied by a return of the erections and sleeplessness.

To take the pulv. camph. e. opio.

Sept. 3rd.—He has had no echordee or erections, as he was not in bed all night.

4th.—No echordee; there is a little tendency to erections, ac-

accompanied by shooting pains in the penis. To take the sp. camph. again.

6th.—Another and worse relapse; he had a painful erection this morning.

7th.—He has taken some beer; had a slightly painful erection this morning. The dose of camphor, now increased to a teaspoonful at bed-time, does not completely keep them off.

8th.—No echordee; a little painful erection this morning.

From this time forth, this dose of camphor taken at bed-time, kept the erections in check, or prevented them from being painful, though the gonorrhœa was not completely cured till the 28th.

Case 8.—T. J., August 1st, 1850. Has a very bad gonorrhœa; the chordee has been most distressing; he has some painful erections, which compel him to rise two or three times in the night. To take ℥xx. of the sp. camph. at bed-time.

2nd.—No echordee; a painful erection at 4 A.M. To take the camphor on sugar.

3rd.—No echordee or erections. Continue.

7th.—He had a little painful erection on Saturday night, and both nights since. To take the camphor more freely.

9th.—The echordee and erections gone again.

In these cases, the camphor was given every night, and was just sufficient to check the chordee for a short time. In some of these cases the chordee went as soon as large doses were given.

In the next series of cases, the dose was much larger, but not continued beyond a night or two after its full effect had been produced. But by this I do not mean to say that when some four or five doses of camphor have been taken, the chordee will never return, though the clap continues unabated; what I mean is, *that once an impression is made on this symptom, it will rarely return without a relapse in the disease, and if it does return, that it will be in a much milder form.*

Case 9.—A. N. applied to me, Oct. 15th, 1850. He has had gonorrhœa two months, and has been treated with salines and injections nearly all that time. The chordee is very troublesome.

To take ʒj. of the sp. camph. every night on going to bed.

19th.—This produced very little effect; but on the succeeding night the pain gave way a little.

To take ʒij.

21st.—He went last night to the extent of ʒiiss., with complete relief to the chordee.

23rd.—Slightly troubled with painful erections.

26th.—He may be considered cured of the gonorrhœa. The chordec never returned, and the erections were only trifling, and unattended with pain.

Case 10.—J. S., a well-built healthy young man, presented himself to day, Oct. 17th, 1850. He has clap for the first time; his bowels a little confined; the scalding is just coming on. He had felt no symptoms of any kind till to-day, when his attention was drawn to it by some itching of the glans.

The soda and jalap powder twice a day.

22nd.—The scalding has undergone no abatement, and the pain on making water extends over the iliac regions. He has such painful erections, that he could not rest all last night.

To continue the powder, and take ʒj. of the sp. camph. every night.

This had the desired effect. For the first time he rested tolerably well, being only disturbed three times. The next night he repeated the dose with the same success, and only awoke twice. After the third night, he remained completely free from it; but what most of all excited his admiration was, that he was at once relieved of all scalding by the camphor, (?) and that the discharge decreased rapidly after using it, perhaps in consequence of the decrease of irritation.

Case 11.—N. S. contracted clap, July, 1850; it was very bad, and accompanied by much scalding, pain, &c. He took copaiba, and used lotions and injections, but without benefit, and came at last to me, Nov. 14th.

On the 20th, the chordee, with which he had been previously tormented, again came on. On the 26th, he complained of this, and was ordered ʒj. of the sp. camph. every time the chordee came on; this was perfectly effectual, and, after the 27th, he had no more annoyance from it.

Case 12.—W. H., Dec. 17th, 1850. Has severe gonorrhœa. He is disturbed almost every night by painful erections.

To take the essence of camph. in ʒj. doses.

24th.—They have now nearly disappeared, and with them the running. He works in a warm shop, and as soon as he gets warm the erection comes on.

To take the camph. in the day time also.

He had no further return of them after the second night, and those in the day time were almost as rapidly allayed by the use of the essence.

Case 13.—B. S., Dec. 19th, 1850. Had gonorrhœa accompanied by chordee. The pain is very severe, lasting for some time after the erection had gone down; but he has remarked that the chordee is averted by directing his attention to something else.

To take the camph. in 3j. doses.

20th.—After the first dose, he had no pain; he woke naturally in the night, and took a second.

21st.—Last night he took a dose before going to bed. He had no erection through the night.

24th.—Since that time he has had no return of it; when he first began to take the camphor, the pain was so bad as to annoy him considerably, even in the day time, and allow him no rest at all at night.

Case 14.—T. M. This patient, who has lived very irregularly for some time, came to me Oct. 27th, with a severe gonorrhœa. The penis was swollen; the foreskin could not be retracted, and he complained of such painful erections, that he was utterly deprived of sleep.

To take 3j. of the sp. camph. and repeat it if he awoke.

He took the camph. as directed. One dose was enough, he having slept well for the first time since this symptom came on, and not having had one erection since.

Case 15.—J. B., Feb. 22nd, 1851. Has had gonorrhœa for some time. It is very severe, the running being thick and green, and the penis much swollen; the scalding is not very severe.

Feb. 26th.—Last night the chordee came on very bad, so that the whole night through he was never free from it, and even when he fell into a doze, he had a dreamy consciousness of pain. Every half hour or so he was awakened by an unmistakable pain, accompanied by bending of the penis.

To take 3j. of the camph. on going to bed; and 5j. each time the chordee comes on.

27th.—He took 3j. on going to bed, having had erections for two or three hours before, and even when undressing; they soon left him after the camphor was taken, and he fell asleep. Soon

after 2 A.M. he awoke with an erection, and took a dose of the camphor. He remained restless and feverish, but had no more of the chordee.

28th.—He took ʒj. of the camph. on going to bed; he had no more chordee, or, if he had, was not aware of it, as he slept soundly till next morning.

Case 16.—Sarah H., Nov. 13th. Has had gonorrhœa for two months; it is very severe, and accompanied by bearing-down pains. In the early part of December she suffered relapse, in consequence of catching cold, and the pains became so severe as to confine her to bed. Here they even seemed to get worse. On December 12th, I ordered her 20 drops, three times a day, of ess. camph., to be taken in some saline mixture.

Within forty-eight hours the pains were so far relieved, that she left her bed, and scarcely ever suffered from them afterward. The gonorrhœa also rapidly declined; perhaps from her not being so much exhausted by pain.

I will now leave the reader to draw his own conclusions. As I have said, the limits of a paper like this prevent me from going further into detail. But I think I have brought forward so much that we may fairly assume:—

1stly. That camphor in this form is a sure, safe, and applicable remedy for chordee.

2ndly. That it should be given in full doses, and persevered in till the chain of morbid actions is broken.

3rdly. That its use affords no guarantee against the re-appearance of the symptom in cases of relapse of the gonorrhœa.

Gleet.

1. DIVISIONS OF GLEET.—NECESSITY OF CURING IT. 2. REMEDIES.—BLISTERING. 3. MODE OF ACTION.—CASES.

1. *Divisions of Gleet.*—At first sight, nothing seems easier to cure than a slight discharge, which we can attack at one and the same time with outward and inward remedies; yet gleet in its course and history shows us how such preconceived notions fade before the stern realities of an intractable and disgusting complaint. The multiplicity of remedies brought forward proves most forcibly of all how often our ordinary resources have failed. In this, as in too many instances, our hand seems paralysed and our footstep arrested at the most hopeful stage of treatment.

As essentially local as a disease can be, gleet may yet be constitutional, and admit of constitutional treatment. Apparently uniform and simple in its history, nature, and treatment, it is yet susceptible of useful division, and exposed to complication. Let us review the classes into which it naturally falls.

The first, is that of the prolonged second stage of clap itself.* In some persons, in spite of any treatment that may be adopted, and of the most careful attention on the part both of the patient and surgeon, clap will continue severe, or degenerate into a slight or thin purulent running, staining the linen, becoming worse after connexion, communicating the infection, and poisoning happiness

* I am well aware, that this, like some of the other varieties mentioned here is not properly nor commonly called gleet; but what generic name shall we give to these chronic runnings, which are not all discharges from the urethra?

and health. Nay, in my hands, strictures have formed in some cases within three months from the date of infection, although the treatment was begun with early and continued most assiduously. In such cases we must suppose a tendency in the part or constitution to keep up such a diseased state.

The second, is where there is more or less mucous discharge, ranging from that where the lips of the urethra are simply glued together, to that where there is a free flow of mucus. The former seems frequently to arise from neglect; the latter to be more constitutional.

The third, is where the testicle has been inflamed. Here there is, especially after erection of the penis, a discharge of mucus sometimes mixed with semen. It is not very common.

The fourth, is a discharge after going to stool or making water. A straining effort is made to dislodge something which seems blocking up the passage, and a large quantity of matter like white of egg is thrown out. It seems to be connected with the prostate, perhaps with the bladder.

The fifth, is the gleet of stricture. This is sometimes thin and broken, sometimes thick and purulent, sometimes pure mucus. The thin and broken discharge is generally found in weakened persons having strictures of considerable standing; the thick and purulent, where a stricture arises during a clap; and the pure mucus, where it arises during a gleet, or at all events when the remedies used have brought about the decay of the clap, not, however, in time to prevent a stricture coming on. These are all, however, only rough sketches of the classes and their causes.

The first, second, and fourth classes, will alone form the subject of this paper. In the third, it is the testicle which requires attention. In the fifth, the bougie is our sole aid and staff.

Necessity of curing it.—All that could be said as to the necessity of attending to and removing this state of matters as soon as possible, may be summed up in one word: *the disease must be cured*, or the patient will turn to the quack, ever ready to delude him with the hopes of a safe and rapid restoration to health and vigour. What steps have been taken to attain this end?

Remedies.—Much has been done. The remedies used may be divided into the attainable, as aperients, salines, opoiba, eubebs, bark, steel, and turpentine; injections, plugging the urethra with

cotton, cauterizing the urethra, counter-irritation to the skin on the under surface of the urethra, cold bathing, &c.

The unattainable, as sea-voyaging, sea-bathing, change of air, and similar remedies. I call them unattainable, because not one person in fifty can resort to them ; men cannot or will not always leave their business ; they have not the means of obtaining change of air—the time of the year is unsuitable, or some such cogent reason is at hand ; and hence, even if infallible, which my experience of them would lead me to doubt, they are objectionable. Moreover, they lead us away from a search for undiscovered remedies ; so that, I think, as grand and comprehensive means of cure, the practitioner had better dismiss them from his mind.

Lastly, we have the undiscovered or neglected means of cure.

Here, then, are the elements of the problem—A disease to cure, a reason for curing it, and the modes of cure generally given. Are they adequate ?

I believe (for means are yet wanting to enable us to say with complete accuracy) that in 49 cases out of 50 they are. But what is to be done with this fiftieth case, when all the usual remedies have failed ? Shall we tread the same path again ; ring the changes once more from aperients to astringents, from mild injections of $\frac{1}{4}$ gr. of nitrate of silver to caustic plugs and suppositories ? or shall we be trying something new ?

Experience has long ago convinced me of the helplessness of attempting the former. When the patient is sick, and wearied of medicines, his digestion impaired, and his health shaken, it is not the time to subject him to a repetition of an experiment, the first trial of which has proved ineffectual.

2. *Blistering*.—In these refractory cases, then, I propose to revive or introduce blistering the penis. It is, I believe, little known or used in gleet, yet, without exception, it is the most powerful that can be applied. Not merely will a single blister frequently cure the most prolonged gleet,—not merely will it rapidly sweep away all dregs of the disease in its ordinary course, but it will often cure those runnings which have resisted all known and used methods. I have seen two blisters, with a mild injection or two, at once cure a clap which had defied the most energetic treatment ; and *as I never found a case which resisted blistering and injections together, that was not complicated with stricture or affection of the testicle*, I am slowly arriving at the

conviction, *that every case of clap or gleet, however obstinate, may, if uncomplicated, be cured by blistering singly or combined.*

To illustrate and urge forwards this operation by every means in my power,—to invite attention to it, that it may be put to the severe test of practice,—to attest it by cases which I have collected and watched,—to point out the necessity of quitting the beaten paths of treatment, and try a new remedy more powerful than those in use, is the object of this paper. But as so many remedies have fallen into disuse from the indiscriminate use or misapplication of them, and as so many which are in favour have been arrested on their path by obstacles issuing from the same sources, I must here enter my protest against being supposed to recommend blistering in gleet, unless properly applied, and in the cases I have referred to.

In order that a blister may be properly applied, there are some points which, however trifling they may seem, require as much attention as the leading features of the case. Where these are neglected, blistering is apt to produce such a filthy excoriated mess, that the patient will not submit to it a second time; whereas, if carefully laid on and dressed, it is, from its being out of the reach of friction in the ordinary movements of the body, even less troublesome than if on a limb or the trunk. Before putting it on, the hair at the root of the penis is cut off, and, if the foreskin be naturally retracted, it must be drawn a little forwards over the glans. A piece of paper is then to be fitted on the penis, and cut till it exactly covers it from the root to within half an inch of the mouth of the urethra. This is then laid down on the blister, which is cut out by it, wrapped round the penis, and fastened with threads behind the glans and near the root. The patient should remain perfectly quiet during the time it is on, lest any motion should bring the blister against the scrotum, and vesicate it; but he must not apply it on going to bed, or he will most likely fall asleep, and not awake till the penis is one mass of vesications,—a state productive of an unnecessary amount of suffering.

In the milder cases, or where the skin is tender, an hour or an hour and a half will be sufficient. The blister is then removed; if there are any vesicated spots, they are covered with pieces of linen spread with zinc ointment, and then a layer of cotton is

bound over these, and covered with a piece of linen, kept on by a thread, or, what is better, two very thin rings of vulcanised Indian rubber.

Where a severer case renders a more energetic employment of the remedy necessary, it must be kept on two or four hours, until free vesication is produced; zinc ointment is then applied. To protect the penis from friction, a T bandage, with a linen bag sown into the part which receives the penis, or a handkerchief carried round the waist and dipping in front so as to receive the penis and keep it up against the abdomen, is necessary.

The first effect of this application is to increase the discharge considerably, which then terminates either by altering its character, becomingropy and mucous, and finally disappearing in a few days, or by remaining somewhat more persistent and requiring a few injections, when the penis is so far advanced towards healing that it can be handled without pain, or demanding even a second blister. One of the most cleanly and convenient, and least painful forms of blister, is Brown's blistering tissue; it causes much less irritation, and heals much more quickly than the ordinary blister. The blistering fluids, if strong enough to vesicate, caused such pain that I soon renounced the use of them.

3. *Mode of action.*—How does this remedy act? By counter-irritation, will perhaps be the answer. But, if this were the case, why should there be increased action in the urethra for a few days, and why should the discharge from the urethra begin to disappear when the counter-irritant surface is healing up? It would seem as if the organised constituents of the urethra are capable of keeping up a certain amount of over-action for an indefinite time; but that when hurried beyond this by a healthy stimulant, a *rebound* takes place, which leaves them less capable than before of furnishing a secretion, morbid in amount or in quality, or in both. We see something similar in prurigo pubis, where a blister causes an exacerbation of the symptoms, succeeded, however, in some cases, by a healthier state of the skin; in bubo, treated by a blister, &c.

The cases which now follow have been selected from among many, with a view of showing the applicability of the remedy, not merely to a variety of cases, but under a variety of circumstances, which, in practice, are not less to be considered than the nature and duration of the disease itself.

Slight Acute Gonorrhœa.

Case 1.—A. B. applied to me, February 28, with gonorrhœa, which he had had four days, and which was treated with salines, there being some feverishness present. On the 5th of March, there being no improvement, a blister was applied, and some sulphate of magnesia was added to his medicine. On the 12th he came again; the cure was complete.

Slight Gonorrhœa.

Case 2.—Joseph G——n contracted gonorrhœa March 11, 1850; there was no chordee or painful erection, and only slight scalding.

14th.—Saline powder every morning.

19th.—The scalding continues, the discharge better. Soda and jalap powder to be taken twice a day.

21st.—The scalding continues. To go on with the powder and use a zinc injection, ʒj. ad Oj.

26th.—The scalding gone; the injection has relieved him most of anything.

April 6th.—He returned to-day as bad as at first, and was then blistered.

13th.—Every trace of the discharge gone. I saw him some months after; he had remained quite free from any discharge.

Protracted Acute Gonorrhœa.

Case 3.—John I. applied April 10th, 1850, with a running which he had had for six months; there was a free discharge attended with pain and scalding, and he seemed very weak.

Mist. ferri c. ʒj.

Dec. aloes c. ʒss.; mix and take three times a day.

12th.—The medicine agrees with him, but there is not the slightest alteration in the discharge. He has long used injections, &c., without any benefit, and as he cannot attend regularly, I have ordered a blister to be applied to the penis.

15th.—The discharge is almost gone.

To have two pills of turpentine and strychnia every night and morning.

19th.—He has not had any discharge since his last visit.

Protracted Acute Gonorrhœa.

Case 4.—Mr. D., a healthy man, applied to me Oct. 15th, 1850, with a clap, which he had had five months. He had taken an immense quantity of copaiba, purgatives, &c., but, in spite of all this, the disease was always coming on again as bad as ever. However favourably it might promise for a few days, it was sure to return. He asserts that he took the medicine exactly as it was ordered, notwithstanding the great aversion he has to copaiba. When I first saw him he had little chordee or scalding; but there was a very free, thick, purulent discharge. He had used strong nitrate of silver injections, which gave him excessive pain, but produced no beneficial effect on the progress of the disease. He never subjected himself to any great restrictions in diet, and it would appear that he and his surgeon somehow or another never carried out very consistently any plan of treatment; for when the patient was getting well the medicine was left off, as if both were tired of it. Sometimes it was suddenly changed, and then the old copaiba mixture was resorted to, apparently without any particular reason; sometimes the patient proposed a medicine, which was forthwith accorded him; at last he came to me.

Finding his stomach much disordered, I prescribed some liq. potass. in bitters. This was immediately followed by an increase in the scalding, to check which the acet. of potass. was substituted, and calomel and ipecacuanha were ordered at night. At the same time, I injected him with chloride of zinc, and he himself, two or three times every evening, used the acetate and sulphate of zinc in injections; but the painful erections, constipation, pain on making water, went on unabated. On the 21st, he was suddenly attacked with irritability of the bladder, and all medicines were suspended, except the use of ether and camphor, which, with hot bathing, seemed to afford him some relief. On the 31st, all symptoms of irritability having passed off, the calomel and ipecacuanha, with the acet. of potass. were recommenced, and caustic suppositories were substituted for the injections. He also went into the country, but grew worse, though he lived very regularly.

On the 8th of November he began using the camphor, to check the erections, which had become latterly nearly as bad as ever. The discharge was unchecked.

To be blistered.

10th.—The blister was kept on three hours and a half; it was followed by a free discharge from the urethra. In all other respects he is better.

12th.—The soreness of the blister is so far abated, that injections can be used. To have the sol. of chloride of zinc and nitric acid and bark.

13th and 14th.—The discharge now rapidly decreased; the erections and scalding have quite gone away.

On the 15th no discharge was to be seen, nor had he noticed any on rising that morning. He was in high spirits. To continue the injections.

19th.—On squeezing the urethra, a very little discharge, somewhat like whey was seen. There was no scalding or erection; but the urethra when pressed felt like a rigid tube, as if in a state of permanent spasm, so that I was disposed to regard this disappearance of the discharge as treacherous. Meanwhile, his general health continued pretty good, and though he worked hard, he was very abstemious.

On the 22nd the injection, which had been continued, produced more pain than usual; and on the 24th a little discharge was again seen. The injection was made milder, and on the 25th it had disappeared.

On the 28th he, for the first time, took a quantity of beer, the immediate effect of which was the reappearance of the discharge, which, by the 3rd of December, had again become thick and purulent.

To be blistered again, but to continue in other respects the same. No alteration in diet.

Dec. 6th.—After putting on his blister, which he kept on three hours and a half, he found the discharge at once disappear, and has since remained free from it.

On the 16th I saw him again; he had seen no discharge at all since, though he had continued to drink beer, and have connexion with women.

In the spring of the year I saw him again, when he gave me the same account.

Clap, Relapse, Cure.

Case 5.—W. J. has now, Feb. 1, 1850, had clap three months,

for which he tells me he has taken "all manner of physic." It is purulent, and accompanied by pain on erection, sealding, &c.

To take the saline powder, and use a zinc injection, 3j. ad Oj.

March 8th.—Though progressing, he is not so well as might be expected; he looks pale and bloodless.

To continue the injection, and take the red oxide of iron, 3ss. ter die.

On the 12th I began injecting him every morning, and by the 19th the discharge was gone. On the 21st it reappeared, thick and purulent, and accompanied by great irritability of the bladder, which I partly ascribed to his having drank some beer, and allowed his bowels to become constipated, and partly to the dull, dusty weather. He was ordered a blister to the penis, a strong sulphate of zinc injection, and a saline mixture every four hours, with ʒiiss. of sulph. of magnes. in each dose.

22nd.—The blister was kept on four hours, and has risen freely; there is no discharge from the urethra, and he feels much better. All pain and uneasiness are gone, and the bowels are freely open.

To go on with the mixture, and dress the blister with cotton wadding, not cutting open the vesications.

From this time there never was any trace of the disease to be seen; on three distinct occasions I have examined the penis, and found no discharge.

Gleet alternating with Purulent Discharge.—Cure.

Case 6.—J. B., Esq., applied to me, June 1, 1849, giving me the following detail of his case:—About six years before, he contracted gonorrhœa, and, having a deep-rooted dislike to medicines of all kinds, he only lived low, and endeavoured for about fifteen months to let it wear itself out; but, finding that it was more likely to wear him out, he applied to various practitioners and some surgeons of eminence, without any success, for the simple reason that he never did what they told him. He tried copaliba capsules, sea-bathing, shower-baths, and, for a little while, the tincture of steel, but got no better. Sometimes there was a discharge of pus from the urethra, sometimes only mucus, but he was never free from it; some surgeons thought he had a stricture, but he

never would allow a bougie to be passed, so that the point remained uncertain.

At last a friend brought him to me. As he had still the old dislike to "physicking," I proposed to pass a bougie, and, if there were no stricture, to blister the penis, which he considered a "disgusting nuisance;" but, he said, if there was anything that could be done at once, he did not mind how painful, he would submit to it, "only he would not have instruments poked into his bladder for any one living." I painted the penis with blistering fluid, which immediately produced intense pain for half an hour, and ordered him eight grains of calomel in one dose. This had an instantaneous effect; the discharge went away, and reappeared in a milder form. With great difficulty I managed to procure his attendance for a few days, during which I injected the urethra with solution of sulphate of zinc, and the gleet disappeared completely. I have often seen him since, and he tells me, that sometimes, when suffering from a cold or over-living, he has seen a minute point of mucus come from the urethra, but that, with this exception, he has remained well.

Gleet.—Cure.

Case 7.—G. K., Hoxton, applied November 6, 1849, with a gonorrhœa, which had broken out six days previously. He was ordered a saline powder to be taken three times a day. I did not see him again till the 1st of February, but I found he had continued the use of this powder, and had injected himself three times daily with sol. of sulph. of zinc. Finding that his clap had degenerated into a gleet, I ordered him 25 minims of cæapaiba and 15 of sp. terebinth. three times a day. The injection to be continued.

8th.—He appears better. Continued.

21st.—The clap still persisting, I ordered a blister to the penis, and ʒss. of the red oxide of iron three times a day. When seen on the 26th, he was cured of all the discharge. The powder was continued, and he attended regularly till the 1st of March, when, no discharge having been seen since the date of the blistering, he was dismissed cured.

Gleet.—Cure.

Case 8.—R. T. has now, August 28, 1849, had gleet for about thirty-six days; he has taken various medicines, but without any material benefit.

To apply a blister to the penis for four hours.

30th.—The discharge increased very much by the morning after; but in a few hours disappeared, and has not since returned. Nothing can now be seen; the canal seems quite free from moisture, beyond the usual dampness peculiar to it.

He was not again attacked by it.

Gleet of Four Months' standing.—Cure.

Case 9.—W. H. applied October 18, 1849, with a gonorrhœa of three weeks' standing. It is not very severe, and, up to the present moment, he has not taken any medicine for it.

To take the saline powder three times a day.

30th.—He has taken the medicine regularly. There is now only a gleet, but it is accompanied by some scalding.

To have some soda and opium powder; and take two pills with turpentine and strychnia every night.

Feb. 26, 1850.—Since the last date, he has attended very irregularly, sometimes taking his medicine, sometimes leaving it off—fancying his gleet was cured, and always finding it return. The tincture of muriate of iron was also ordered him, but had produced no great effect. He has now come for the purpose of being “cured in good earnest.”

To blister the penis, and take ʒss. of the red oxide of iron three times a day.

28th.—There has been no discharge seen since. To continue.

March 1.—His bowels are confined; to have a purgative draught.

5th.—He has seen no discharge since. To continue the powder from which he says, he finds benefit; he thinks he gains strength from it, which he greatly needs, being a railway carrier.

Nearly twelve months after I again saw him; he had had no return of the discharge.

Gleet of long standing.—Cure Protracted.

Case 10.—C. H. applied to-day, Oct. 23, 1849, with gleet, which he has had five or six years, and for which he has tried all the usual remedies, as copaiiba, injections, &c.

To blister the penis, and take the steel mixture \mathfrak{zj} . ter die.

25th.—Much better; the blister was kept on longer than I ordered, and is now discharging freely. The gleet is lessened.

He obtained a situation the following day, which prevented him from coming any more, drank beer, and neglected taking medicine. In the beginning of February, finding the gleet returning, he was tempted to try some "balsamie pills," but, not deriving benefit from this, he again came to me. I found but a very slight gleet, and it appeared from his account, that it had never been anything like so bad since he put on the blister, but still the cure was not complete. He was therefore injected, first with sulph. of zine, and then with nit. of silver, and took the mist. ferri e. three times a day. In a few days he was cured, and when I last saw him he had had no return of the disease.

Gleet of Three Months' standing.—Cure.

Case 11.—R. W. has now, October 31, 1849, had gleet for three months. He has been constantly under treatment, but has observed during that time no improvement.

To blister the penis, and take the turpentine and strychnia pills.

Nov. 7.—He is going on well, the discharge being now much less.

To take the copaiiba and turpentine, \mathfrak{mxxx} . of the former, and \mathfrak{mxxv} . of the latter, three times a day.

17th.—There has been no discharge since the blister healed.

Gleet of Several Weeks' standing.—Cure.

Case 12.—Mr. J. J. applied to me, Jan. 3, 1850, for advice respecting a gonorrhœa which he had had some time. He had tried to cure it himself, but was not succeeding according to his expectation. As he could not come regularly, I ordered him sulph. of zine injections, and some saline medicines, to remove

the feverishness and constipation under which he was suffering. On the 8th he was better, and was directed to continue his medicines, and the same on the 24th, when the injection was made a little stronger. On the 5th of March, nothing remaining but a little gleet, he was put on the tincture of steel, thirty drops three times a day, and left off the injections.

March 20th.—I now found that there was still some slight gleet, and the injections were therefore resumed; his bowels being costive, some aperient medicine was ordered.

25th.—There is no discharge to be seen, but he says a portion about the size of a pea, and like curd in appearance, came away this morning from the mouth of the urethra. His bowels remain obstinately constipated, and he is fretful about the gleet never going away.

A strong injection, immediately followed by a blister to the penis. ℥j. of the pulv. jalap. c. every other morning.

28th.—No discharge has been seen since he put on the blister. His bowels were acted on very freely by the powder on the 26th, and have remained costive ever since. He did not take the powder this morning, fearing it might act when he was out.

R. Conf. sennæ ℥ij; pulv. jalap. gr. x. Misce. fiat mass. omni mane sum.

April 2nd.—The same report; no discharge has been seen since. Immediately within the urethra there is a white patch, as if there had been an ulcer.

6th.—Complete cure. The white patch is still to be seen.

Gleet of Two Years' standing.—Cure.

Case 13.—E. S., a delicate, dissipated young man, applied to me, Feb. 20, 1850, with gleet, which he has had full two years. He has taken copaiba at different intervals, and has used injections, but has never once got rid of it. His health is out of order, his appetite bad, and his bowels constipated.

R. Acid. sulph. dil. ℥x.; infus. quass. ℥j. ter die sum. Conf. sennæ ℥j.; ferri. ses. ox. ℥ij. M. sumat coch. j. min omni mane. Zine. sulph. gr. iv.; aq. distil. ℥j. Ft. inj. omni mane utend.

Feb. 21.—Very much better; the discharge is almost gone; the injection produced a slight tingling. Cont.

22nd.—The discharge is gone, his bowels are open, and he feels better.

23rd.—This morning a minute point of discharge, like albumen, can be seen on pressing the urethra.

The injection to be increased to gr. viii. ad ℥j.

25th.—The last injection produced but very little tingling. He says there was some slight discharge this morning, but I can see none now. He is getting much stronger, and the confection keeps his bowels open. As he cannot come to be injected, I have ordered him a zinc injection to use three times a day. To continue the mixture and confection.

March 4.—Since his last visit he has occasionally noticed a speck of discharge; on opening the mouth of the urethra and looking in, a white blanched spot is seen; it looks as if the mucous membrane had been burnt by nitrate of silver. Bowels rather too open.

Not to take quite so much of the confection.

12th.—There has been no discharge since, and there is none to be seen now.

15th.—He has taken to his old habits again and got drunk; the discharge has re-appeared. As he will not or cannot come regularly, I have ordered him a blister to the penis, and to take the *mist. ferri c. ℥j, ter die.*

22nd.—He put on the blister when going to bed, fell asleep, and when he woke next morning his penis was enormously swollen and quite raw. "It had, however," he said, "done him a mighty dale of good, and drawed away a full half-pint of water."

To continue the mixture.

He now left me, considering himself cured, but in February, 1851, was once more a patient with acute gonorrhœa; up to the date of his fresh infection he had had no discharge since using the blister, though he had been very dissipated.

Prostatic (?) Gleet.—Cure.

Case 14.—W. O. has now, March 5, 1850, been some time under treatment for gleet; there is great uneasiness and pain about the prostate, particularly on crossing his legs. The bladder seems also disordered, and micturition is accompanied by pain.

After he has had a stool, a quantity of glairy matter is thrown out of the urethra; it seems to be about a small tablespoonful in bulk. He has used injections, salines, &c., for twelve months, which have cured the gonorrhœa, but he has noticed no improvement in his gleet.

To take the eopaiba and turpentine mixture three times a day, and inject with sulph. of zinc.

20th.—No improvement.

R. Hyd. c. cret. gr. iij. Pulv, rhei. gr. v. M. om. mane sum.

A blister to the perinæum.

21st.—The blister has risen freely.

Acid. nit. dil. ℥xv.; dec. uva. usi. ℥iss. M. ter die sum.

24th.—Better. Continue the mixture and powders.

28th.—Still some discharge.

Tinct. canth. ℥xii.; dec. pareira brav. ℥j. M. ter die sum.

30th.—Continue.

April 4.—Continue.

11th.—He is still pale and weak; there is now scarcely any progress made.

Rep. pulv. Mist. ferri c. ℥j. ter die.

A piece of blue ointment, the size of a nut, to be rubbed into the perinæum every night.

13th.—Still the same.

Go on with the medicines, and take two pills of turpentine and strychnia every night.

15th.—Great improvement. Continue.

On the 20th, as some discharge still seemed to linger about him, I ordered another blister to the perinæum. This was quite effectual. I saw him some weeks after, and found he had had no discharge since.

There is, I believe, nothing novel in the idea of blistering the perinæum for gleet, and I have merely added this case for the sake of distinguishing this form of gleet, both in diagnosis and treatment. Want of space, rather than want of material, compels me to stop here; but I cannot lay down my pen without expressing a hope that the subject will not be lost sight of.

Whether the treatment I have ventured to lay down will ever find its way into general use is a point on which it would ill be-

come me to offer an opinion. If superior to the old plans it will triumph, as it is easier to overthrow a dynasty than a truth, against the invasive force of which the most obstinate prejudice, that asylum of ignorance and bigotry, cannot avail. If not, then the blame rests with me. Right or wrong, these investigations have cost me years of labour, and I am not without hopes that the reader will be able to glean some hints from them.

THE END.



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